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FATTI MASCHII PAROLE FEMINE

COLLEGE PARK, MARYLAND

Calendar for 1932, 1933, 1934

1932

JULY

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Issued Monthly by The University of Maryland, College Park, Md.
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UNIVERSITY CALENDAR

1932-1933

COLLEGE PARK

First Semester

1932.		
Sept. 20-21	Tuesday-Wednesday	Registration for freshmen.
Sept. 22	Thursday	Upper Classmen complete registration.
Sept. 23	Friday, 8.20 a.m.	Instruction for first semester begins.
Sept. 29	Thursday	Last day to change registration or to file schedule card without fine.
Nov. 24	Thursday	Thanksgiving Day. Holiday.
Dec. 14	Wednesday, 4.20 p.m.	Christmas Recess begins.
1933.		
Jan. 4	Wednesday, 8.20 a.m.	Christmas Recess ends.
Jan. 28-Feb. 4	Saturday-Saturday	First semester examinations.

Second Semester

Jan. 23-27	Monday-Friday	Registration for second semester.
Feb. 6	Monday	Last day to complete registration for second semester without payment of late registration fee.
Feb. 7	Tuesday, 8.20 a.m.	Instruction for second semester begins.
Feb. 13	Monday	Last day to change registration or to file schedule card without fine.
Feb. 22	Wednesday	Washington's Birthday. Holiday.
April 11-19	Tuesday, 4.10 p.m. Wednesday, 8.20 a.m.	Easter Recess.
May 22-26	Monday-Friday	Registration for first semester, 1933-34.
May 30	Tuesday	Memorial Day. Holiday.
May 31-June 7	Wednesday-Wednesday	Second semester examinations for seniors.
June 3-10	Saturday-Saturday	Second semester examinations.
June 11	Sunday, 11 a.m.	Baccalaureate Sermon.
June 12	Monday	Class Day.
June 13	Tuesday, 11 a.m.	Commencement.

Summer Term

June 19-24	Monday-Saturday	Rural Women's Short Course.
June 28	Wednesday	Summer School begins.
Aug. 8	Tuesday	Summer School ends.
Aug. 10-15	Thursday-Tuesday	Boys' and Girls' Club Week.

BALTIMORE (PROFESSIONAL SCHOOLS)

First Semester

1932.		
Sept. 16	Friday	*Registration for Evening Students (LAW).
Sept. 19	Monday	Instruction begins with first scheduled period (LAW—Evening).
Sept. 26	Monday	*Registration for Day Students (LAW).
Sept. 27	Tuesday	Instruction begins with first scheduled period (LAW—Day).
Sept. 29	Thursday	*Registration for first- and second-year students (DENTISTRY, MEDICINE, PHARMACY).
Sept. 30	Friday	*Registration for all other students (DENTISTRY, MEDICINE, PHARMACY).
Oct. 3	Monday	Instruction begins with the first scheduled period (DENTISTRY, MEDICINE, PHARMACY).
Nov. 24	Thursday	Thanksgiving Day. Holiday.
Dec. 21	Wednesday	Christmas Recess begins after the last scheduled period.
1933.		
Jan. 3	Tuesday	Instruction resumed with first scheduled period.
Jan. 28	Saturday	First semester ends after last scheduled period (LAW—Day).
Jan. 30	Monday	*Registration for Day Students (LAW).
Jan. 31	Tuesday	Instruction begins for second semester with first scheduled period (LAW—Day).
Feb. 4	Saturday	First semester ends after the last scheduled period (DENTISTRY, LAW — Evening, MEDICINE, PHARMACY).

Second Semester

Feb. 6	Monday	*Registration for evening students (LAW).
Feb. 6	Monday	*Registration for first- and second-year students (DENTISTRY, MEDICINE, PHARMACY).
Feb. 7	Tuesday	*Registration for all other students (DENTISTRY, MEDICINE, PHARMACY).
Feb. 8	Wednesday	Instruction begins with the first scheduled period (DENTISTRY, LAW — Evening, MEDICINE, PHARMACY).
Feb. 22	Wednesday	Washington's Birthday. Holiday.
April 13	Thursday	Easter recess begins after the last scheduled period.
April 18	Tuesday	Instruction resumed with the first scheduled period.
May 27	Saturday	Semester ends in Day and Fourth Year Evening LAW.
June 3	Saturday	Commencement.

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* The offices of the Registrar and Comptroller are open during the registration periods from 8.30 a. m. to 6.00 p. m. Advance registration encouraged.

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Samuel M. Shoemaker, Chairman Eccleston, Baltimore County	1924-1933
John M. Dennis, Treasurer Union Trust Co., Baltimore	1923-1932
William P. Cole, Jr. Towson, Baltimore County	1931-1940
John E. Raine 1200 St. Paul Street, Baltimore	1930-1939
Charles C. Gelder Princess Anne, Somerset County	1929-1938
W. W. Skinner, Secretary Kensington, Montgomery County	1927-1936
E. Brooke Lee (Appointed 1927) Silver Spring, Montgomery County	1926-1935
Henry Holzapfel, Jr. Hagerstown, Washington County	1925-1934
George M. Shriver Old Court Road, Baltimore	1928-1933

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George M. Shriver John M. Dennis

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EXPERIMENT STATION AND INVESTIGATIONAL WORK

E. Brooke Lee, Chairman
W. W. Skinner Henry Holzapfel, Jr.

EXTENSION AND DEMONSTRATION WORK

George M. Shriver, Chairman
E. Brooke Lee John E. Raine

INSPECTION AND CONTROL WORK

John M. Dennis, Chairman
Henry Holzapfel, Jr. Charles C. Gelder

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J. M. H. ROWLAND, M.D., Dean of the School of Medicine.

HENRY D. HARLAN, LL.D., Dean Emeritus of the School of Law.

ROGER HOWELL, A.B., LL.B., Ph.D., Dean of the School of Law.

E. FRANK KELLY, Phar.D., Advisory Dean of the School of Pharmacy.

ANDREW G. DUMEZ, Ph.D., Dean of the School of Pharmacy.

T. O. HEATWOLE, M.D., D.D.S., Secretary of the Baltimore Schools.

J. BEN ROBINSON, D.D.S., Dean of the School of Dentistry.

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M. MARIE MOUNT, M.A., Dean of the College of Home Economics.

C. O. APPLEMAN, Ph.D., Dean of the Graduate School.

ADELE H. STAMP, M.A., Dean of Women.

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W. M. HILLEGEIST, Registrar.

ALMA H. PREINKERT, M.A., Assistant Registrar.

LEONARD HAYS, M.D., University Physician.

H. L. CRISP, M.M.E., Superintendent of Buildings.

T. A. HUTTON, A.B., Purchasing Agent and Manager of Students' Supply Store.

GRACE BARNES, B.S., B.L.S., Librarian (College Park).

OFFICERS OF INSTRUCTION

For the Year 1931-1932.

At College Park

PROFESSORS

C. O. APPLEMAN, Ph.D., Professor of Botany and Plant Physiology, Dean of the Graduate School.

E. C. AUCHTER, Ph.D., Professor of Horticulture and Horticulturist of the Experiment Station.

GRACE BARNES, B.S., B.L.S., Librarian.

F. W. BESLEY, Ph.D., Professor of Farm Forestry, State Forester.

L. B. BROUGHTON, Ph.D., Professor of Chemistry, State Chemist, Chairman of the Pre-Medical Committee.

W. H. BROWN, Ph.D., Professor of Economics and Sociology.

O. C. BRUCE, M.S., Professor of Soil Technology.

B. E. CARMICHAEL, M.S., Professor of Animal Husbandry.

R. W. CARPENTER, A.B., LL.B., Professor of Agricultural Engineering.

E. N. CORY, Ph.D., Professor of Entomology, State Entomologist.

H. F. COTTERMAN, Ph.D., Professor of Agricultural Education and Rural Sociology.

MYRON CREESE, B.S., E.E., Professor of Electrical Engineering.

HAYES BAKER-CROTHERS, Ph.D., Professor of History and Political Science.

S. H. DEVAULT, Ph.D., Professor of Agricultural Economics.

NATHAN L. DRAKE, Ph.D., Professor of Organic Chemistry.

C. G. EICHLIN, A.B., M.S., Professor of Physics.

ALVAN C. GILLEM, Major Inf. (D.O.L.), Professor of Military Science and Tactics.

HARRY GWINNER, M.E., Professor of Engineering Mathematics.

MALCOLM HARING, Ph.D., Professor of Physical Chemistry.

H. C. HOUSE, Ph.D., Professor of English and English Literature.

A. N. JOHNSON, S.B., D.Eng., Professor of Highway Engineering, Director of Engineering Research, Dean of the College of Engineering.

W. B. KEMP, Ph.D., Professor of Genetics and Agronomy and Assistant Dean of the College of Agriculture.

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C. L. MACKERT, M.S., Professor of Physical Education for Men.

H. B. MCDONNELL, M. S., M.D., Professor of Agricultural Chemistry.

FRIEDA M. MCFARLAND, M.A., Professor of Textiles and Clothing.

Edna B. McNaughton, M.A., Professor of Home Economics Education.

DeVoe Meade, Ph.D., Professor of Animal and Dairy Husbandry.

J. E. Metzger, B.S., M.A., Professor of Agronomy and Assistant Director of the Experiment Station.

K. J. Morris, A.M., Administrative Coordinator of Practice Teaching.

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H. J. Patterson, D.Sc., Director of the Agricultural Experiment Station, Dean of the College of Agriculture.

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C. J. Pierson, A.M., Professor of Zoology.

R. C. Reed, Ph.B., D.V.M., Professor of Animal Pathology.

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W. T. L. Taliaferro, A.B., D.Sc., Professor of Farm Management.

C. E. Temple, M.A., Professor of Plant Pathology, State Plant Pathologist.

A. S. Thurston, M.S., Professor of Floriculture and Landscape Gardening.

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R. H. Waite, B.S., Professor of Poultry Husbandry.

A. E. Zucker, Ph.D., Professor of Modern Languages and Comparative Literature.

ASSOCIATE PROFESSORS

L. A. Black, Ph.D., Associate Professor of Bacteriology.

Tobias Dantzig, Ph.D., Associate Professor of Mathematics.

Harry A. Deferrari, Ph.D., Associate Professor of Modern Languages.

Geary Eppley, M.S., Associate Professor of Agronomy.

Charles B. Hale, Ph.D., Associate Professor of English.

Susan Emolyn Harman, Ph.D., Associate Professor of English.

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L. W. Ingham, M.S., Associate Professor of Dairy Production.

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ASSISTANT PROFESSORS

Wayland S. Bailey, M.S., Assistant Professor of Mechanical Engineering.

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Henry Brechbill, M.A., Assistant Professor of Education, and Critic Teacher.

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Walter H. E. Jaeger, Ph.D., Assistant Professor of History.

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N. E. Phillips, Ph.D., Assistant Professor of Zoology.

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A. W. Richeson, Ph.D., Assistant Professor of Mathematics (Baltimore).

Ralph Russell, M.S., Assistant Professor of Agricultural Economics.

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W. P. Shepard, 1st. Lieut. Inf., (D.O.L.), Assistant Professor of Military Science and Tactics.

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Guy P. Thompson, M.S., Assistant Professor of Zoology (Baltimore).

Everett C. Upson, Capt. Inf., (D.O.L.), Assistant Professor of Military Science and Tactics.

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R. M. Watkins, M.A., Assistant Professor of Public Speaking.

S. M. Wedeberg, B.A., Assistant Professor of Accountancy and Business Administration.

R. C. Yates, Ph.D., Assistant Professor of Mathematics.

R. W. Young, A.B., 1st. Lieut. Inf. (D.O.L.), Assistant Professor of Military Science and Tactics.

LECTURERS

V. R. Boswell, Ph.D., Senior Olericulturist, U. S. Department of Agriculture, Lecturer in Olericulture.

F. E. Gardner, Ph.D., Agent, U. S. Department of Agriculture, Lecturer in Pomology (Plant Propagation).

L. H. James, Ph.D., Food Research Division, Bureau of Chemistry and Soils, U. S. Department of Agriculture, Lecturer in Food Bacteriology and in Physiology of Bacteria.

C. E. Resser, Ph.D., Curator, National Museum, Lecturer in Engineering Geology.

G. J. Schulz, A.B., Assistant Director Legislative Reference Service, Library of Congress, Lecturer in Political Science.

R. E. Snodgrass, A.B., Division of Insect Pathology and Morphology, Bureau of Entomology, U. S. Department of Agriculture, Lecturer in Insect Morphology.

Charles Thom, Ph.D., Principal Microbiologist, Bureau of Chemistry and Soils, U. S. Department of Agriculture, Lecturer in Soil Microbiology.

INSTRUCTORS

Geo. F. Alrich, M.S., E.E., Instructor in Mathematics.

Mary Barton, B.A., C.D.E.F., Instructor in Education and Critic Teacher.

E. S. Bellman, A.M., Instructor in Sociology.

J. B. Blandford, Instructor in Horticulture, Horticultural Superintendent.

Sumner Burhoe, M.S., Instructor in Zoology.

O. C. Clark, B.S., Instructor in Physics.

H. E. Cordner, M.S., Instructor in Olericulture.

J. E. Faber, Jr., M.S., Instructor in Bacteriology.

Gardner H. Foley, M.A., Instructor in English (Baltimore).

George W. Fogg, M.A., Instructor in Library Science; Reference and Loan Librarian.

B. L. Goodyear, Instructor in Music.

Lucile Hartmann, M.S., Instructor in Foods, Nutrition, and Institutional Management.

Earl Hendricks, Staff Sergeant (D.E.M.L.), Instructor in Military Science and Tactics.

L. C. Hutson, Instructor in Mining Extension.

Gilbert Macbeth, Ph.D., Instructor in English.

Wm. H. McManus, Warrant Officer, Instructor in Military Science and Tactics.

M. W. Parker, M.A., Instructor in Plant Physiology and Biochemistry.

Arthur C. Parsons, A.M., Instructor in Modern Languages (Baltimore).

Elizabeth Phillips, A.B., M.A., Instructor in Physical Education for Women.

Melvin A. Pittman, M.S., Instructor in Physics (Baltimore).

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J. Thomas Pyles, M.A., Instructor in English (Baltimore).

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Helen Wilcox, A.B., Instructor in Modern Languages.

Leland G. Worthington, B.S., Instructor in Agricultural Education.

ASSISTANTS

G. J. Abrams, M.S., Assistant in Entomology.

M. T. Bartram, M.S., Assistant in Bacteriology.

Hester Beall, Assistant in Public Speaking.

Jessie Blaisdell, Assistant in Music.

F. Y. Brachbill, B.S., Assistant in Chemistry (Baltimore).

Rachel L. Carson, B.A., Assistant in Zoology (Baltimore).

Adelaide C. Clough, A.B., M.A., Assistant Critic Teacher.

Anne V. Coxen, A.B., Assistant in Modern Languages.

Donald Hennick, Assistant in Mechanical Engineering.

Grace Kemp, B.A., Assistant in English.

Audrey Killiam, B.S., Assistant in Home Economics.

Jane Kirk, B.S., Assistant in Home Economics Education.
Hazel T. Mackert, M.A., Assistant in Public Speaking.
Mary Jane McCurdy, B.S., Assistant in Home Economics.
Agnes McNutt, B.S., Assistant in Home Economics.
W. K. Morrill, Ph.D., Assistant in Mathematics (Baltimore).
C. D. Murphy, M.A., Assistant in English.
J. F. O'Brien, B.S., Assistant in Zoology (Baltimore).
A. J. Prahl, A.M., Assistant in Modern Languages (Baltimore).
Mark Schweizer, M.A., Assistant in Modern Languages.
Virginia Smith, A.B., Assistant in Modern Languages.
Otto Siebeneichen, Band Leader.
G. S. Weiland, M.S., Assistant in Chemistry.
Kate White, Assistant in Library.

1931-1932
GRADUATE ASSISTANTS

C. B. Anders	Agronomy
W. J. Basehore	Agricultural Economics
David H. Brannon	Entomology
R. G. Brown	Plant Physiology
J. R. M. Burger	Mathematics
W. P. Campbell	Chemistry
R. F. Chandler	Horticulture
J. W. Coddington	Agricultural Economics
F. D. Cooley	English
S. L. Crosthwait	Entomology
A. P. Dunnigan	Bacteriology
J. B. Edmond	Horticulture
P. L. Fisher	Plant Physiology
W. A. Frazier	Horticulture
Castillo Graham	Entomology
W. T. Haskins	Chemistry
J. W. Heuberger	Botany
D. W. Hookom	Entomology
F. H. Kaler	English
V. M. Kalmbach	Mathematics
R. Miller	Modern Languages
W. G. Rose	Chemistry
C. W. Seabold	Agricultural Education
F. T. Simonds	Botany
T. B. Smith	Chemistry
Kenneth G. Stoner	History
E. P. Walls	Extension, Canning Crops
J. C. White	Chemistry
L. E. Williams	Chemistry

1931-1932
FELLOWS

W. H. Anderson	Entomology
M. M. Bernard	Zoology
A. D. Bowers	Chemistry
W. C. Boyer	Dairy Husbandry
R. A. Fisher	Agronomy
Ralph Garreth	Economics
M. R. Hatfield	Chemistry
I. C. Haut	Horticulture
V. C. Howell	Entomology
R. P. Jacobsen	Chemistry
J. R. King	Bontany
M. E. Koons	Chemistry
E. D. Matthews	Agronomy
F. E. Meckling	History
J. J. Parks	Plant Physiology
F. E. Pringle	Modern Languages
S. A. Shrader	Chemistry
B. B. Sproat	Horticulture
M. R. Temple	Home Economics
F. P. Veitch	Chemistry
L. L. Vincent	Agricultural Economics
M. W. Woods	Plant Pathology

LIBRARY STAFF

Grace Barnes, B.S., B.L.S.	Librarian
Gertrude Bergman, A.B.	Cataloguer
George W. Fogg, M.A.	Reference and Loan Librarian
Alma Hook, B.S.	Head Cataloguer
Kate White	Assistant

INSPECTION AND REGULATORY SERVICE
(Feeds, Fertilizer, and Lime)

L. B. Broughton, Ph.D.	State Chemist
L. E. Bopst, B.S.	Associate State Chemist
E. C. Donaldson, M.S.	Chief Inspector
W. M. J. Footen	Inspector
E. M. Zentz	Inspector
H. R. Walls	Assistant Chemist and Micro-analyst
L. H. Van Wormer	Assistant Chemist
R. E. Baumgardner, B.S.	Assistant Chemist
Albert Heagy, B.S.	Assistant Chemist
W. H. Supplee, Ph.D.	Assistant Chemist
M. E. High	Laboratory Assistant

THE UNIVERSITY SENATE

Raymond A. Pearson, M.S., D.Agr., LL.D., President of the University.
H. C. Byrd, B.S., Assistant to the President; Director of Athletics.
H. J. Patterson, D.Sc., Director of the Agricultural Experiment Station; Dean of the College of Agriculture.
T. B. Symons, M.S., D.Agr., Director of the Extension Service.
A. N. Johnson, S.B., D.Eng., Dean of the College of Engineering.
T. H. Taliaferro, C.E., Ph.D., Dean of the College of Arts and Sciences.
J. M. H. Rowland, M.D., Dean of the School of Medicine.
Roger Howell, A.B., Ph.D., LL.B., Dean of the School of Law.
E. Frank Kelly, Phar.D., Advisory Dean of the School of Pharmacy.
Andrew G. DuMez, Ph.D., Dean of the School of Pharmacy.
T. O. Heatwole, M.D., D.D.S., Secretary of the Baltimore Schools.
J. Ben Robinson, D.D.S., Dean of the School of Dentistry.
W. S. Small, Ph.D., Dean of the College of Education.
M. Marie Mount, M.A., Dean of the College of Home Economics.
C. O. Appleman, Ph.D., Dean of the Graduate School.
Adele H. Stamp, M.A., Dean of Women.
Alvan C. Gillem, Major Inf. (D.O.L.), Head of the Department of Military Science and Tactics.
W. B. Kemp, Ph.D., Professor of Genetics and Agronomy, Assistant Dean of the College of Agriculture.

THE GRADUATE SCHOOL COUNCIL

Raymond A. Pearson, M.S., D.Agr., LL.D., President of the University.
C. O. Appleman, Ph.D., Dean of the Graduate School, Chairman.
H. J. Patterson, D.Sc., Director of the Agricultural Experiment Station.
L. B. Broughton, Ph.D., Professor of Agricultural Chemistry.
A. N. Johnson, D.Eng., Professor of Highway Engineering.
T. H. Taliaferro, C.E., Ph.D., Professor of Mathematics.
E. N. Cory, Ph.D., Professor of Entomology.
H. C. House, Ph.D., Professor of English and English Literature.
H. F. Cotterman, Ph.D., Professor of Agricultural Education.
DeVoe Meade, Ph.D., Professor of Animal and Dairy Husbandry.
E. C. Auchter, Ph.D., Professor of Horticulture.
M. Marie Mount, M.A., Professor of Home and Institutional Management.
W. S. Small, Ph.D., Professor of Education.
Glenn L. Jenkins, Ph.D., Professor of Pharmaceutical Chemistry (Baltimore).
Eduard Uhlenhuth, Ph.D., Professor of Gross Anatomy (Baltimore).

FACULTY COMMITTEES

At College Park

ALUMNI

Dr. Symons, Chairman; Messrs. Bopst, Cory, Eppley, Hoshall, Oswald, Shaw, and Truitt.

ATHLETIC BOARD

Mr. Byrd, Chairman; Messrs. Broughton, Mackert, Metzger, and Richardson.

BUILDINGS AND GROUNDS

Mr. Crisp, Chairman; Messrs. Blandford, Creese, Hutton, Kilbourne, Metzger, Mrs. Murphy, Messrs. Nesbit, Pyle, W. T. L. Taliaferro, and Thurston.

CATALOGUE, REGISTRATION, ENTRANCE

Professor Kemp, Chairman; Messrs. Bruce, Cotterman, Crothers, House, Misses McNaughton, Preinkert, Professor Spann, Miss Stamp, Professor Steinberg, and the Professor of Military Science and Tactics.

COMMENCEMENT

Dean T. H. Taliaferro, Chairman; Messrs. Cory, Goodyear, Miss Mount, Messrs. Richardson, Thurston, Truitt, and the Professor of Military Science and Tactics.

EDUCATIONAL STANDARDS AND ACADEMIC REGULATIONS

Dean Appleman, Chairman; Dean Johnson, Miss Mount, Dean Patterson, Miss Preinkert, Dean Small, and Dean Taliaferro.

FARMERS DAY

Dean Patterson, Chairman; Messrs. Auchter, Besley, Clark, Meade, Miss Mount, Messrs. Pickens, Steinberg, Symons, Temple, and Waite.

FRESHMAN WEEK

Mr. Carpenter, Chairman; Dr. Hays, Mr. Hennick, Dean Johnson, Mr. Lowder, Miss Preinkert, Dean Small, Miss Stamp, and Dr. Wiley.

LIBRARY

Dr. House, Chairman; Miss Barnes, Messrs. Long, Skelton, W. T. L. Taliaferro, Mrs. Welsh, and Dr. Zucker.

NON-RESIDENT LECTURERS

Professor Richardson, Chairman; Messrs. Drake, Eppley, Hale, Mrs. Murphy, Professor Skelton.

PRE-MEDICAL

Professor Broughton, Chairman; Messrs. Davis, Eichlin, Pierson, Welsh, Black, and Wiley.

SANITATION

Dr. Hays, Chairman; Messrs. Faber, McConnell, Miss Hartmann, Dr. Pickens, and Lieut. Shepard.

SECTION ASSIGNMENT

Dr. C. E. White, Chairman; Messrs. Burhoe, Eppley, Hale, Kramer, Miss Preinkert, Mr. Pyle, Lieut. Shepard and Mrs. Welsh.

STUDENT AFFAIRS

Dean Johnson, Chairman; Messrs. Bopst, Brechbill, Creese, Hays, Kemp, Mrs. McFarland, Professor Metzger, Miss Stamp, and Mr. Watkins.

FINANCES OF STUDENT ORGANIZATIONS

Mr. Eppley, Chairman; Messrs. Brown, Casbarian, DeVault, Hoshall, Mrs. Murphy, Messrs. Shadick, Wedeberg. and President of Student Assembly.

STUDENT LOANS

Miss McKenney, Chairman; Miss Prienkert, Messrs. Quigley and W. T. L. Taliaferro, and President of the Senior Class.

STUDENT PUBLICATIONS

Mr. Hottel, Chairman; Mr. Carrington, Miss McKenney, and Mr. Snyder.

RHODES SCHOLARSHIPS

Dr. House, Chairman; Deans Appleman, Johnson, Patterson, Taliaferro.

INTRA-MURAL SPORTS

Messrs. Mackert, Pollock, Lowder, Heagy, Lieut. Young.

AGRICULTURAL EXPERIMENT STATION STAFF

Harry J. Patterson, D.Sc.	Director.

Agricultural Economics:

S. H. DeVault, Ph.D.	Agricultural Economist.
Ralph Russell, M.S.	Assistant.
Paul Walker, M.S.	Assistant.
Arthur B. Hamilton, M.S.	Assistant.
Ray Hurley, M.S.	Assistant.

Agricultural Engineering:

R. W. Carpenter, A.B., LL.B.	Engineering.
H. E. Besley, M.S.	Assistant.

Agronomy (Crops and Soils):

†J. E. Metzger, B.S., M.A.	Agronomist.
W. B. Kemp, Ph.D.	Associate Agronomist (Genetics).
G. Eppley, M.S.	Assistant (Crops).
O. C. Bruce, M.S.	Associate Soil Technologist.
R. P. Thomas, Ph.D.	Soil Technologist.
E. H. Schmidt, M.S.	Assistant (Soils).
H. B. Winant, M.S.	Assistant (Soils).
R. G. Rothgeb, Ph.D.	Associate (Plant Breeding).
R. L. Sellman, B.S.	Assistant.

Animal and Dairy Husbandry:

DeVoe Meade, Ph.D.	Dairy and Animal Husbandman.
B. E. Carmichael, M.S.	Animal Husbandman.
W. E. Hunt, M.S.	Associate, Animal Husbandry.
L. W. Ingham, M.S.	Associate (Dairy Production).
R. C. Munkwitz, M.S.	Associate (Dairy Manufacturing).
M. H. Berry, M.S.	Assistant, Dairy Husbandry.
W. C. Supplee, Ph.D.	Assistant (Meat Curing).

Animal Pathology and Bacteriology:

E. M. Pickens, A.M., D.V.M.	Animal Pathologist.
R. C. Reed, Ph.B., D.V.M.	Pathologist.
*A. L. Brueckner, B.S., D.V.M.	Associate Pathologist.
L. J. Poelma, D.V.M., M.S.	Assistant.
H. M. DeVolt, D.V.M.	Assistant (Poultry Diseases).
C. L. Everson, D.V.M.	Assistant.
*Alex. Gow, D.V.M.	Assistant.
*C. R. Davis, M.S., D.V.M.	Assistant (Poultry Diseases).
H. T. Bartram, M.S.	Assistant (Meat Curing).
*I. M. Moulthrop, D.V.M.	Assistant (Poultry Diseases).

† Assistant Director.

* Live Stock Sanitary Laboratory.

Botany, Pathology, Physiology:

C. O. Appleman, Ph.D.	Physiologist.
J. B. S. Norton, M.S., D.Sc.	Pathologist.
C. E. Temple, M.S.	Pathologist.
R. A. Jehle, Ph.D.	Associate Pathologist.
Ronald Bamford, Ph.D.	Assistant Botanist.
Glenn A. Greathouse, Ph.D.	Associate Physiologist.
M. W. Parker, M.S.	Assistant Physiologist.

Entomology:

E. N. Cory, Ph.D.	Entomologist.
H. S. McConnell, B.S.	Associate.
Geo. S. Langford, Ph.D.	Associate.
L. P. Ditman, Ph.D.	Assistant.
Geo. Abrams, M.S.	Assistant (Bees).

Home Economics:

Margaret Coffin, M.A.	Research Worker

Horticulture:

E. C. Auchter, Ph.D.	Horticulturist.
T. H. White, M.S.	Olericulturist and Floriculturist.
A. L. Schrader, Ph.D.	Pomologist.
S. W. Wentworth, M.S.	Associate Pomologist.
*F. E. Gardner, Ph.D.	Associate (Plant Propagation).
H. E. Cordner, M.S.	Assistant Olericulturist.
W. A. Matthews, M.S.	Assistant, Canning Crops.
Paul Marth, B.S.	Assistant, Pomology.

Poultry Husbandry:

R. H. Waite, B.S.	Poultry Husbandman.
Geo. D. Quigley, B.S.	Associate.

Ridgely Sub-Station:

Albert White, B.S.	Superintendent.

Seed Inspection:

F. S. Holmes, B.S.	Inspector.
Ellen Emack	Assistant Analyst.
Ruth M. Shank	Assistant Analyst.
Constance Degman, B.S.	Assistant Analyst.
O. M. Faber, B.S.	Assistant Analyst.
Olive Kelk	Assistant Analyst.
Elizabeth Shank	Assistant.

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* Agent U. S. Department of Agriculture.

EXTENSION SERVICE STAFF

*Thomas B. Symons, M.S., D.Agr.	Director.
*E. I. Oswald, B.S.	County Agent Leader.
*E. G. Jenkins	State Boys' Club Agent.
*Miss Venia M. Kellar, B.S.	State Home Demonstration Agent.
*Miss Dorothy Emerson	Girls' Club Agent.
*Miss Helen Shelby, M.A.	Clothing Specialist.
*Miss Margaret McPheeters, M.S.	Nutrition Specialist.
*Miss Edythe M. Turner	District Home Demonstration Agent.
*Miss Florence H. Mason	District County Home Demonstration Agent.
Mark F. Welsh, B.S., D.V.M.	Inspector in Charge of Hog Cholera.
George J. Abrams, M.S.	Assistant Specialist in Beekeeping.
*W. R. Ballard, B.S.	Specialist in Vegetable and Landscape Gardening.
H. C. Barker, B.S.	Specialist in Dairying.
†H. E. Besley, B.S.	Assistant in Agricultural Engineering.
†David H. Brannon, B.S.	Graduate Assistant in Horticultural Inspecting.
†Sam L. Crosthwait, B.S.	Graduate Assistant in Horticultural Inspecting.
†R. W. Carpenter, A.B., LL.B.	Specialist in Agricultural Engineering.
O. R. Carrington, B.A.	Assistant Specialist in Agricultural Journalism.
*K. A. Clark, M.S.	Specialist in Animal Husbandry.
*J. A. Conover, B.S.	Specialist in Dairying.
†E. N. Cory, Ph.D.	Specialist in Entomology.
†S. H. DeVault, Ph.D.	Specialist in Marketing.
†B. L. Goodyear	Specialist in Music.
†Castillo Graham, M.S.	Assistant Specialist in Entomology.
†J. W. Heuberger, M.S.	Graduate Assistant in Horticultural Inspecting.
†Don W. Hookem, M.S.	Graduate Assistant in Horticultural Inspecting.
†Van. C. Howell, B.S.	Graduate Assistant in Insect Control.
T. D. Holder, B.S.	Specialist in Canning Crops.
†R. A. Jehle, Ph.D.	Specialist in Plant Pathology.
Richard Kilbourne, B.S., M.F.	Extension Forester.
G. S. Langford	Specialist in Insect Control.
†DeVoe Meade, Ph.D.	Specialist in Animal Husbandry.
†A. E. Mercker	Potato Specialist.

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* In co-operation with the United States Department of Agriculture.
† Devoting part time to Extension Work.

Paul Nystrom, B.S., M.S.	Farm Management Specialist.
F. W. Oldenburg, B.S.	Specialist in Agronomy.
W. B. Posey, B.S.	Specialist in Tobacco.
Paul A. Raper, B.S.	Assistant in Poultry Certification.
*W. H. Rice, B.S.	Specialist in Poultry.
†C. S. Richardson, A.M.	Specialist in Educational Extension.
S. B. Shaw, B.S.	Chief, Maryland State Department of Markets.
†J. W. Sprowls, Ph.D.	Specialist in Psychology.
Mark M. Shoemaker, A.B., M.L.D.	Assistant Specialist in Landscape Gardening.
Paul W. Smith, M.S.	Assistant in Economics and Statistics.
A. H. Snyder, B.S.	Extension Editor.
†W. T. L. Taliaferro, A.B., ScD.	Specialist in Farm Management.
†C. E. Temple, M.A.	Specialist in Plant Pathology.
*A. F. Vierheller, M.S.	Specialist in Horticulture.
†E. P. Walls, B.S., M.S.	Assistant Canning Specialist.
C. E. Wise, B.S.	Assistant Agricultural Engineering Specialist.

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* In co-operation with the United States Department of Agriculture.

† Devoting part time to Extension Work.

COUNTY AGENTS

County	*Name*	*Headquarters*
Allegany	*R. F. McHenry, B.S.	Cumberland.
Anne Arundel	*S. E. Day, B.S.	Annapolis.
Baltimore	*H. B. Derrick, B.S.	Towson.
Calvert	*John B. Morsell, B.S.	Prince Frederick.
Carroll	*L. C. Burns, B.S.	Westminster.
Cecil	*J. Z. Miller, B.S.	Elkton.
Charles	*Paul D. Brown, B.S.	La Plata.
Dorchester	*Wm. R. McKnight, B.S.	Cambridge.
Frederick	*H. R. Shoemaker, B.S., M.A.	Frederick.
Garrett	*John H. Carter, B.S.	Oakland.
Harford	*H. M. Carroll, B.S.	Bel Air.
Howard	*J. W. Magruder, B.S.	Ellicott City.
Kent	*James D. McVean, B.S.	Chestertown.
Montgomery	*O. W. Anderson, M.S.	Rockville.
Prince George's	*W. B. Posey, B.S.	Upper Marlboro.
Queen Anne's	*E. W. Grubb, B.S.	Centerville.
St. Mary's	*G. F. Wathen	Loveville.
Somerset	*C. Z. Keller, B.S.	Princess Anne.
Talbot	*R. S. Brown, B.S.	Easton.
Washington	*M. D. Moore, M.S.	Hagerstown.
Wicomico	*J. P. Brown, B.S.	Salisbury.
Worcester	*R. T. Grant, B.S.	Snow Hill.

Assistant County Agents

Allegany	M. S. Downey, B.S.	Cumberland.
Harford	*W. H. Evans, B.S.	Bel Air.
Kent	Stanley Sutton	Chestertown.
Montgomery	*A. A. Ady, B.S.	Rockville.
Prince George's	*P. E. Clark, B.S.	Upper Marlboro.
Baltimore	*W. H. Carroll, B.S.	Towson.

Local Agents

Southern Md.	*J. F. Armstrong (Col.)	Seat Pleasant.
Eastern Shore	*L. H. Martin (Col.)	Princess Anne.

COUNTY HOME DEMONSTRATION AGENTS

County	*Name*	*Headquarters*
Allegany	*Maude A. Bean	Cumberland.
Anne Arundel	*Mrs. G. Linthicum, B.S.	Annapolis.
Baltimore	*Anna Trentham, B.S.	Towson.
Calvert	A. P. Miller	Prince Frederick.
Caroline	*Bessie Spafford, B.S.	Denton.
Carroll	*Agnes Slindee, B.A.	Westminster.
Cecil	*Priscilla Pancoast, B.S.	Elkton.
Charles	*Mary Graham	La Plata.
Dorchester	*Hattie Brooks, A.B.	Cambridge.
Frederick	*Helen Pearson, B.S.	Frederick.
Garrett	*Margaret Burtis, B.S.	Oakland.
Harford	*Catharine Maurice, B.S.	Bel Air.
Howard	*Myrne Hendry, B.S.	Ellicott City.
Kent	*Helen Schellinger	Chestertown.
Montgomery	*Blanche A. Corwin, B.S.	Rockville.
Prince George's	*Ethel Regan	Hyattsville.
St. Mary's	*Ethel Joy	Leonardtown.
Somerset	*Hilda Topfer, B.S.	Princess Anne.
Talbot	*Margaret Smith	Easton.
Washington	*Ardath Martin, B.S.	Hagerstown.
Wicomico	Marian G. Swanson	Salisbury.
Worcester	*Lucy J. Walter	Snow Hill.

Assistant Home Demonstration Agent

Frederick	Ernestine Chubb, B.S.	Frederick.

Garden Specialist

Madison and Lafayette Aves. Administration Bldg., Balto.	Mrs. Adelaide Derringer	Baltimore, Md.

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Local Home Demonstration Agents

Somerset	MRS. JUSTINE C. CLARK	Princess Anne.
Charles, St. Marys, and Prince George's	MRS. ARMINTA J. DIXON	1812 Vernon St., N. W., Washington D. C.

OFFICERS OF INSTRUCTION

(For the Year 1931-1932)

At Baltimore

PROFESSORS

GEORGE M. ANDERSON, D.D.S., F.A.C.D., Professor of Comparative Dental Anatomy and Orthodontia.

CHARLES BAGLEY, JR., Professor of Neuro Surgery.

ROBERT P. BAY, M.D., Professor of Oral Surgery and Anatomy.

HARVEY G. BECK, M.D., Sc.D., Professor of Clinical Medicine.

CHARLES F. BLAKE, M.D., A.M., Professor of Proctology.

CHARLES E. BRACK, Ph.G., M.D., Professor of Clinical Obstetrics.

HUGH BRENT, M.D., Professor of Clinical Gynecology.

L. B. BROUGHTON, Ph.D., Professor of Chemistry.

EDWARD N. BRUSH, M.D., Professor Emeritus of Psychiatry.

A. JAMES CASNER, A.B., LL.B., Professor of Law.

R. M. CHAPMAN, M.D., Professor of Psychiatry.

CLYDE A. CLAPP, M.D., Professor of Ophthalmology.

ALBERTUS COTTON, A.M., M.D., Professor of Orthopaedic Surgery and Roentgenology.

ANNIE CRIGHTON, R.N., Superintendent of Nurses, Director of the School of Nursing.

J. FRANK CROUCH, M.D., Professor Emeritus of Clinical Ophthalmology and Otology.

DAVID M. R. CULBRETH, A.M., Ph.G., M.D. Professor Emeritus of Botany and Materia Medica.

CARL L. DAVIS, M.D., Professor of Anatomy.

S. GRIFFITH DAVIS, A.B., M.D., Professor of Anesthesia.

HORACE M. DAVIS, D.D.S., F.A.C.D., Professor of Exodontia, Anesthesia, and Radiodontia.

L. H. DOUGLAS, M.D., Professor of Clinical Obstetrics.

J. W. DOWNEY, M.D., Professor of Otology.

A. G. DUMEZ, Ph.G., Ph.D., Professor of Pharmacy, Dean of the School of Pharmacy.

C. G. EICHLIN, M.S., Professor of Physics.

PAGE EDMUNDS, M.D., Professor of Clinical and Industrial Surgery.

C. REID EDWARDS, M.D., Professor of Clinical Surgery.

EDGAR B. FRIEDENWALD, M.D., Professor of Clinical Pediatrics.

HARRY FRIEDENWALD, A.B., M.D., Professor Emeritus of Ophthalmology.

JULIUS FRIEDENWALD, A.M., M.D., Professor of Gastro-Enterology.

WILLIAM S. GARDNER, M.D., Professor of Gynecology.

OREN H. GAVER, D.D.S., F.A.C.D., Professor of Physiology.

JOSEPH E. GICHNER, M.D., Professor of Clinical Medicine and Physical Therapeutics.

ANDREW C. GILLIS, A.M., M.D., LL.D., Professor of Neurology.

FRANK W. HACHTEL, M.D., Professor of Bacteriology.

HON. HENRY D. HARLAN, A.M., LL.B., LL.D., Dean Emeritus of the School of Law.

EDWARD HOFFMEISTER, A.B., Ph.G., D.D.S., Professor of Materia Medica and Therapeutics.

ROGER HOWELL, A.B., LL.B., Ph.D., Professor of Law, Dean of the School of Law.

ELLIOTT HUTCHINS, M.D., Professor of Clinical Surgery.

BURT B. IDE, D.D.S., F.A.C.D., Professor of Operative Dentistry.

GLENN L. JENKINS, Ph.G., Ph.D., Professor of Pharmaceutical Chemistry.

C. HAMPSON JONES, M.D., C.M., (Edinburgh), Professor of Hygiene and Public Health.

C. LORING JOSLIN, M.D., Professor of Clinical Pediatrics.

M. RANDOLPH KAHN, M.D., Clinical Professor of Ophthalmology.

E. FRANK KELLY, Phar.D., Professor Emeritus of Chemistry, Advisory Dean of the School of Pharmacy.

T. FRED LEITZ, M.D., Clinical Professor of Gastro-Enterology.

BENJAMIN T. LELAND, A.M., Professor of Industrial Education.

G. MILTON LINTHICUM, A.M., M.D., Professor of Diseases of Rectum and Colon.

G. CARROLL LOCKARD, M.D., Professor of Clinical Medicine.

A. J. LOMAS, M.D., D.P.H., Superintendent of the University Hospital.

EDWARD A. LOOPER, M.D., D.Oph., Professor of Diseases of the Throat and Nose.

FRANK S. LYNN, M.D., Professor of Clinical Surgery.

HOWARD J. MALDEIS, M.D., Professor of Embryology and Histology.

STANDISH MCCLEARY, M.D., Professor of Pathology and Clinical Medicine.

ALEXIUS MCGLANNAN, A.M., M.D., LL.D., Professor of Surgery.

SAMUEL K. MERRICK, M.D., Professor Emeritus of Rhinology and Laryngology.

ROBERT L. MITCHELL, Phar.D., M.D., Professor of Bacteriology and Pathology.

L. E. NEALE, M.D., LL.D., Professor Emeritus of Obstetrics.

JOHN RATHBONE OLIVER, Ph.D., M.D., Professor of the History of Medicine.

J. EDGAR ORRISON, D.D.S., Professor Emeritus of Operative Dentistry.

ALEXANDER H. PATERSON, D.D.S., F.A.C.D., Professor of Crown and Bridge and Prosthetic Dentistry.

C. J. PIERSON, A.M., Professor of Zoology.

MAURICE C. PINCOFFS, S.B., M.D., Professor of Medicine.

CHARLES C. PLITT, Ph.G., Sc.D., Professor of Botany and Pharmacognosy.

J. DAWSON REEDER, M.D., Professor of Diseases of the Rectum and Colon.

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R. G. Willse, M.D., Associate in Gynecology.
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William V. Adair, D.D.S., Instructor in Clinical Operative Dentistry.
Elizabeth Aitkenhead, R.N., Instructor in Surgical Technique for Nurses, Supervisor of Operating Pavilion.
W. A. Anderson, D.D.S., M.D., Instructor in Practical Anatomy.
John Conrad Bauer, Ph.G., M.S., Instructor in Chemistry.
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Thomas Gorsuch Wright, Ph.G., Assistant in Pharmacy.

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The Faculty Councils of the Baltimore Schools are included in the descriptive statements of the respective schools in Section II.

The Faculty Committees of the Baltimore schools are given in the separate announcements issued by the several schools.

SECTION I

General Information

HISTORICAL STATEMENT

The history of the present University of Maryland, until they were merged in 1920, is the history of two institutions. These were the old University of Maryland in Baltimore and the Maryland State College (formerly Maryland Agricultural College) in College Park.

The beginning of this history was in 1807, when a charter was granted to the College of Medicine of Maryland. The first class was graduated in 1810. A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law, and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish a "faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added a college of dentistry, a school of pharmacy, and a school of nursing. No significant change in the organization of the University occurred until 1920, more than one hundred years after the original establishment in 1812.

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Maryland Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the name of the latter was changed to the University of Maryland.

All the property formerly held by the old University of Maryland was turned over to the Board of Trustees of the Maryland State College, and the name was changed to the Board of Regents of the University of Maryland. Under this charter every power is granted necessary to carry on an institution of higher learning and research. It provides that the University shall receive and administer all existing grants from the Federal Government for education and research and all future grants which may come to the State from this source. The University is co-educational in all its branches.

ADMINISTRATIVE ORGANIZATION

The government of the University is vested by law in a Board of Regents, consisting of nine members appointed by the Governor each for a term of nine years. The administration of the University is vested in the President. The University Senate and the Administrative Council act in an advisory capacity to the President. The composition of these bodies is given elsewhere.

The University organization comprises the following administrative divisions:

College of Agriculture.
Agricultural Experiment Station.
Extension Service.
College of Arts and Sciences.
College of Education.
College of Engineering.
College of Home Economics.
Graduate School.
Summer School.
Department of Military Science and Tactics.
Department of Physical Education and Recreation.
School of Dentistry.
School of Law.
School of Medicine.
School of Nursing.
School of Pharmacy.

The University faculty consists of the President, Deans, the instructional staffs of all the divisions of the University, and the Librarians. The faculty of each college or school constitutes a group which passes on all questions that have exclusive relationship to the division represented. The President is ex-officio a member of all of the faculties.

The organization and activities of the several administrative divisions are described in full in the appropriate chapters of Section II.

THE EASTERN BRANCH

The Eastern Branch of the University of Maryland is located at Princess Anne, Somerset County. It is maintained for the education of negroes in agriculture and the mechanic arts.

LOCATION

The University of Maryland is located at College Park, in Prince George's County, Maryland, on the Baltimore and Ohio Railroad, eight miles from Washington and thirty-two miles from Baltimore. At least eight trains a day from each city stop at College Park, which fact makes the place easily accessible from all parts of the State.

The campus fronts on the Baltimore and Washington Boulevard. The suburban town of Hyattsville is two miles to the south, and Laurel is ten miles to the north on the same road. Access to these towns and to Washington may be had by steam and electric railways and busses.

The Professional Schools of Medicine, Nursing, Pharmacy, Dentistry, and Law are located in Baltimore at the corner of Lombard and Greene Streets.

EQUIPMENT

The University equipment of grounds and buildings in College Park and Baltimore is as follows:

College Park

Grounds. The University grounds at College Park comprise about 300 acres. The site is healthful and attractive. The terrain is varied. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area of surrounding country and insures excellent drainage. Many of the original forest trees remain. Most of the buildings are located on this eminence. The adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields. The buildings of the Agricultural Experiment Station face the boulevard. The farm of the College of Agriculture contains about 240 acres, and is devoted to fields, gardens, orchards, vineyards, poultry yards, etc., which are used for experimental purposes and demonstration work in agriculture and horticulture. Recently 270 acres additional have been purchased, about two miles north of the University campus, and this land will be devoted especially to research work in horticulture.

Plans for the location of future buildings have been worked out with due regard to engineering problems and landscape effects.

The sanitary conditions are excellent, as shown by the absence for many years of epidemics in the student body.

The water supply and sewage disposal are provided by the Washington and Suburban Sanitary Commission.

Buildings. The buildings comprise about twenty-six individual structures, which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: the Agriculture Building, which accommodates the College of Agriculture, the College of Education, the Agricultural and Home Economics Extension Service, and the Auditorium; the Library Building, which houses the Library and the Executive Offices; Morrill Hall, which accommodates in part the College of Arts and Sciences; the Old Library Building, in which are the offices of the Dean of Women and the English and History Departments; the Engineering Building, to which a large addition has been made during the past year; the Home Economics Building; the Chemistry Building for instruction in Chemistry and for State work in analysis of feeds, fertilizers, and agricultural lime; the Dairy Building; the New Horticulture Building, which will adequately accommodate all class room and laboratory work in that department, and also work in horticultural research for both government and state; the Plant Research Building; the Poultry Buildings; the Central Heating Plant, which takes care of heating for all the campus buildings.

Experiment Station. The offices of the Director of the Experiment Station are in the Agriculture Building, while other smaller buildings house the laboratories for research in soils and for seed testing. Other structures are as follows: an agronomy building; a secondary horticulture building; and barns, farm machinery building, silos, and other structures required in agricultural research. Some of the research is being conducted in the Rossbourg Inn.

Physical Education. This group consists of The Ritchie Coliseum, which provides quarters for all teams, an Athletic Office, trophy room, rooms for faculty, and visiting team rooms, together with a playing floor and permanent seating arrangements for 4,262 persons; Byrd Stadium, with a permanent seating capacity of 8,000, also furnished with rest rooms for patrons, dressing rooms, and equipment for receiving and transmitting information concerning contests in progress; a Gymnasium, used in part by the Military Department and generally for physical education work; and the Girls' Field House, for all girls' sports. Playing and practice fields adjacent to the field houses are being completed, and tennis courts now are being added.

Dormitories. Two dormitories, Calvert Hall and Silvester Hall, provide accommodations for 462 men students. Accommodations for 130 women students are provided by Gerneaux Hall and the new Margaret Brent Hall. The Practice House, which for several years was used as a dormitory, has been turned over entirely to the Home Economics Department.

Service Structures. This group includes the Central Heating and Power Plant; the Infirmary, with accommodations for twenty patients, physician's office, operating room, and nursing quarters; Dining Hall and Laundry.

Baltimore

The group of buildings located at the corner of Lombard and Greene Streets provides the available housing for the Baltimore division of the University. There are no grounds other than the sites of these buildings. The group comprises the original Medical School building, erected in 1814, the University Hospital, the Law School building, and a new Laboratory Building for the Schools of Dentistry and Pharmacy. Full descriptions of these parts of the University equipment are found in the chapters devoted to the Baltimore Schools in Section II.

Libraries

Libraries are maintained at both the College Park and the Baltimore branches of the University.

The Library at College Park was transferred in April, 1931, to the new Library Building, which also houses the Executive Offices, Postoffice, and Students' Supply Store. The building is well equipped and well lighted. The reading room on the second floor has seats for 236, and about 4,500 reference books and periodicals on open shelves, the other books being kept in the stack room and three seminar rooms. The stack room is equipped with five tiers of metal stacks and 18 cubicles for advanced study. About 5,500 of the 41,700 books on the campus are shelved in the Engineering, Chemistry, and Entomology Departments, the Graduate School, and other offices. The Library is open from 8 A. M. to 5.30 P. M. Monday to Friday, inclusive; Saturday from 8 A. M. to 12.30 P. M.; Sunday afternoon from 2.30 P. M. to 5.30 P. M.; and all evenings except Saturday from 6 P. M. to 10 P. M.

The Library facilities in Baltimore for the School of Medicine are housed in Davidge Hall; those for the Schools of Dentistry and Pharmacy and the courses in Arts and Sciences are located in the Dentistry and Pharmacy Building; and those for the School of Law are in the new Law Building. The Library hours during the University year are as follows:

		(Saturday)
Medical School	9 A. M. to 10 P. M.	5 P. M.
Law School	9 A. M. to 10.30 P. M.	5 P. M.
Dental School	9 A. M. to 5 P. M.	1 P. M.
Pharmacy	9 A. M. to 5 P. M.	1 P. M.

The Libraries, including departmental libraries, contain a total of 76,506 bound volumes, and large collections of unbound journals. In the two central libraries there are approximately 12,000 United States Government documents, unbound reports, and pamphlets.

Through the Inter-library Loan Systems of the Library of Congress, the United States Department of Agriculture, and other Government Libraries in Washington, the University Library is able to supplement its reference material, either by arranging for personal work in these Libraries or by borrowing the books from them.

ENTRANCE

All communications regarding entrance should be addressed to the Registrar, who administers the entrance requirements for all departments of the University. Communications pertaining to entrance to the College Park Colleges should be addressed to the Registrar, University of Maryland, College Park, Maryland; those pertaining to the Baltimore Schools, to the Registrar, University of Maryland, Lombard and Greene Streets, Baltimore, Maryland.

GENERAL INFORMATION

Age of Applicants. A student who is less than sixteen years of age must have his residence with parents or guardians.

Entrance Preliminaries. Candidates for admission should apply as early as possible to the Registrar for the necessary forms for the transfer of preparatory credits. After these forms have been filled out by the applicant and the high school principal, they should be returned to the Registrar. It is advisable for prospective students to attend to this matter as early as possible after graduation from high school, in order to make sure that the units offered are sufficient and acceptable. The Registrar is always glad to advise with students, either by correspondence or in person, concerning their preparation. The Registrar sends out a general statement of the procedure for new students to follow after they are duly admitted to the University.

Time of Admission. Applicants for admission should plan to enter at the beginning of the school year in September. It is possible to be admitted to certain Colleges at the beginning of either semester, but students can seldom enter the University to advantage except at the opening of the school year.

Registration. Registration for the first semester, except for new students, takes place at the end of the second semester of the preceding year. Students register for the second semester during the week preceding final examinations of the first semester.

Late Registration. Students who do not complete their registration and classification on regular registration days will be required to pay $3.00 extra on the day following the last registration day and $2.00 for each additional day thereafter until their registration is completed. The maximum fine is $9.00. Students who fail to file course cards in the specified periods in May and January are considered late registrants.

After seven days from the opening of a semester, fees are imposed for a change of registration.

Students who, for any reason, are more than seven days late in registering must secure permission from the instructors in charge for admission to courses. Such permission must be given in writing to the student's dean before course cards will be issued.

Freshman Registration. Registration of freshmen for the first semester will take place Tuesday, September 20th. All freshmen are expected to register on this date.

Dormitories will be ready for occupancy by freshmen Monday, September 19th.

A special freshman program is planned covering the time between registration day and the beginning of the instruction schedule, the object of which is to complete the organization of freshmen so that they may begin the regular work promptly and effectively, and to familiarize them with their new surroundings.

Required to Take Military Instruction

All male students, if citizens of the United States, whose bodily condition indicates that they are physically fit to perform military duty or will be upon arrival at military age are required to take for a period of two years, as a prerequisite to graduation, the military training offered by the War Department.

Graduation Requirements for Students Excused from Military Instruction and Physical Education

Students excused from basic military training or physical education without academic credit shall be required to take an equivalent number of credits in other subjects, so that the total credits required for a degree in any college shall not be less than 127 hours. The substitution must be approved by the Dean of the college concerned.

REQUIREMENTS FOR ADMISSION

In general, the requirements for admission to the freshman class are the same as those prescribed for graduation by the approved high schools of Maryland.

High or preparatory school work is evaluated on the basis of "units." A unit represents a year's study in any subject in a secondary school, and constitutes approximately one-fourth of a full year's work. It presupposes a school year of 36 to 40 weeks, recitation periods of from 40 to 60 minutes, and for each study four or five class exercises a week. Two laboratory periods in any science or vocational study are considered as equivalent to one class exercise.

Normally, not more than three units are allowed for four years of English. If, however, a fifth course in English has been taken, an extra unit will be allowed.

Fifteen units, the equivalent of a four-year high school curriculum, are required for admission to all the undergraduate colleges. The additional and special requirements for admission to the professional schools and the Graduate School are given in detail in the chapters devoted to those schools.

Prescribed Units. The following units are required of all candidates for admission:

English	3
Algebra to Quadratics	1
*Plane Geometry	1
Science	1
History	1
Total Prescribed	7

In addition to these seven prescribed units, the following are required:

(a) For the Pre-Medical curriculum: two years of foreign language.

(b) For the Engineering and Industrial Chemistry curricula, it is necessary that the student shall have in addition to one unit in algebra and one unit in plane geometry, a second unit in algebra, completed, and one-half unit in solid geometry.

Students who do not offer entrance units in algebra, completed, and in solid geometry, may enter the Engineering College, but will be obliged, during the first semester, to take courses which will make up the unit in algebra, completed, and one-half unit in solid geometry, and then they may enter upon the regular freshman mathematics at the beginning of the second semester. The work of the second semester freshman mathematics will be offered these students in the summer school.

* A condition in Plane Geometry will be permitted if this subject was not offered in the high school attended. This condition must be removed within a year, at the student's expense.

Elective Units. In addition to the prescribed units, a sufficient number of units to make a total of fifteen must be offered from the following elective subjects:

Agriculture
Astronomy
Biology
Botany
Chemistry
Civics
Commercial Subjects
Drawing
Economics
English
General Science
Geology
History
Home Economics
Industrial Subjects
Language
Mathematics
Music
Physical Geography
Physics
Physiology
Zoology

METHODS OF ADMISSION

Students are admitted to the University by certificate from approved preparatory schools, by transfer from other colleges or universities, or by examination.

Admission by Certificate from Approved Preparatory Schools. A candidate for admission by *certificate* must be a *graduate* of an approved secondary school and be *recommended* by his high school principal. Non-resident applicants must attain the college recommendation grade of their schools, or, if their schools have no college recommendation grade, an average in their high school work at least 10% higher than the lowest passing grade.

The following groups of secondary schools are approved:

(1) *Secondary schools approved by the Maryland State Board of Education.*

(2) *Secondary schools accredited by the Association of Colleges and Preparatory Schools of the Southern States.*

(3) *Secondary schools accredited by the North Central Association of Colleges and Secondary Schools.*

(4) *Secondary schools accredited by the State Universities which are included in the membership of the North Central Association of Colleges and Secondary Schools.*

(5) *Secondary schools approved by the New England College Entrance Certificate Board.*

(6) *High schools and academies registered by the Regents of the University of the State of New York.*

(7) *High and preparatory schools on the accredited list of other State Boards of Education where the requirements for graduation are equivalent to the standard set by the Maryland State Board of Education.*

(8) *State Normal Schools of Maryland and other State Normal Schools having equal requirements for graduation.*

Regulations Governing Admission from Preparatory Schools in Maryland and the District of Columbia. Graduates of Maryland high schools will be admitted in conformity with provisions of the State School Law and the interpretative regulations of the State Board of Education.

(1) *State School Law (Sect. 198). All certificates or diplomas issued to students having completed a course of study in a county high school shall show the group to which said high school belongs, the course taken by the students, and the number of years of instruction given. Any State-supported or State-aided institution of higher learning shall accept as a student any graduate of an approved public high school who is certified by the high school principal as having the qualifications to pursue a course of study in the particular institution of higher learning, said qualifications being based upon standards determined, for graduates of the county high schools, by the State Board of Education and for the graduates of the Baltimore City high schools, by the Board of School Commissioners of Baltimore City; or who shows, by passing examinations set by the particular State-aided or State-supported institution of higher learning, that he or she has the qualifications to pursue a course of study in that institution.*

(2) *Interpretative Regulations of the State Board of Education.*

(a) *A high school graduate is assured two chances of admission to one of the institutions of higher learning concerned*—EITHER BY BEING RECOMMENDED BY HIS HIGH SCHOOL PRINCIPAL *or* BY PASSING ENTRANCE EXAMINATIONS SET BY THE PARTICULAR INSTITUTION.

(b) *The institution of higher learning is* AT LIBERTY TO ACCEPT ANY GRADUATE *even if he neither qualifies for a recommendation from his high school principal nor passes entrance examinations. Such a graduate, however, is* NOT IN A POSITION TO DEMAND ADMISSION.

(c) *Maryland high school principals shall certify for entrance to any Maryland State-supported or State-aided institution of higher learning any student who has met the published subject-matter requirements of the particular higher institution, and who has made a grade of A or B in at least 60% of the college entrance courses which have been pursued in the last two years of the high school course, and a grade of C or higher in all other college entrance courses which have been pursued during the last two years of the high school course.*

(3) In conformity with the preceding State Law and regulations of the State Board of Education, candidates for admission from Maryland high schools will be classified as "certified" and "non-certified," and high school principals will indicate on the application forms whether the candidate is "certified" or "non-certified." Candidates who are "certified" will be admitted to full regular standing in the freshman class. Candidates who are "non-certified" will be admitted on trial, the period of trial to be eight weeks. Students so admitted who within that period do satisfactory work will be placed on full regular standing at the end of that period; those whose work is doubtful will be placed on probation until the end of the first semester; those whose work indicates failure will be advised to withdraw and their parents so notified.

The same regulations govern the admission of graduates of the District of Columbia high schools.

For admission by certificate the applicant should file with the Registrar of the University as soon as possible after the close of the school year in June a certificate of recommendation made out on the blank form furnished by the University.

Admission by Transfer from Other Colleges or Universities. A candidate for admission by transfer from another College or University must present evidence that he has maintained a *satisfactory* and *honorable record* at the institution which he has attended, in addition to having satisfied the entrance requirements of the University of Maryland.

For admission by transfer the applicant should file with the Registrar as soon as possible after the close of the school year in June an application for admission made out on the blank form furnished by the University. In addition he should have furnished the Registrar, by the institution he has attended, a complete official transcript of his record, including the secondary school record and a statement of honorable dismissal.

Advanced Standing. Advanced standing is granted to students transferring from institutions of collegiate rank for work completed which is equivalent in extent and quality to the work of the University of Maryland, subject to the following provisions:

(1) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree with less than one year of resident work.

(2) Regardless of the amount of advanced standing a student may secure, in no case will he be given the baccalaureate degree until he has satisfied the full requirements of the curriculum he may elect.

(3) In case the character of a student's work in any subject is such as to create doubt as to the quality of that which preceded it elsewhere, the University reserves the right to revoke at any time any credit allowed.

(4) Credit will not be allowed for more than one-fourth of those courses in which the grade is the lowest passing grade of the college attended.

An applicant may request examination for advanced credit in any subject.

Admission by Examination. Candidates who are not eligible for admission by certificate or by transfer will be admitted upon presenting evidence of having passed the examinations of either the College Entrance Examination Board or the New York Regents' Examinations covering work sufficient to meet the entrance requirements.

The University does not give entrance examinations, but accepts certificates of the College Entrance Examination Board and the New York Regents' Examinations.

The certificate of the College Entrance Examination Board, showing a grade of 60 per cent. or higher, will be accepted as satisfying the entrance requirements in a subject. These examinations are held at various points once a year, beginning the third Monday in June. Full information regarding these examinations may be obtained from the Secretary of the College Entrance Examination Board, 431 W. 117th Street, New York City.

Credit will be allowed for examinations conducted by the Regents of the University of the State of New York, showing a grade of 75% or higher.

Unclassified Students. Mature students who have had insufficient preparation to pursue any of the four-year curricula may matriculate, with the consent of the Committee on Entrance, for such subjects as they are fitted to take. These students, however, will be ineligible for degrees.

HEALTH SERVICE

PHYSICAL EXAMINATIONS

As soon as possible after the opening of the fall semester, as a measure for protecting the health of the student body, all students who enter the undergraduate colleges at College Park are given a physical examination. The examination of the men students is conducted by the College Physician in co-operation with the Military Department. The examination of the women students is conducted by a woman physician especially employed for this purpose in co-operation with the Dean of Women.

RULES GOVERNING MEDICAL SERVICE

1. All students, paying the fixed University charges, who report at the Infirmary will be given medical attention and medicine, except for special conditions, such as major operations, eye, ear, and nose work, etc.

2. Students residing on the campus when too sick to report at the Infirmary in person will be visited in their rooms by the University Physician or nurse. Except in emergencies, such cases of illness should be reported at the usual hours at the Infirmary.

3. Students residing in fraternity, sorority, or boarding houses adjacent to and approved by the University will be treated by the University Physician the same as students living on the campus. When practicable, sickness should be reported before 9 A. M. to the University Physician (phone Hyattsville 686) or Infirmary (Berwyn 80, Branch 12).

4. Students living at home with relatives or guardians shall not be entitled to medical attention in their homes unless injured in some form of University activity.

5. Students residing in fraternity, sorority, or boarding houses may, upon order of the University Physician, be cared for in the Infirmary. Such students shall pay the University an extra charge of $1.00 per day to cover cost of food and service from the Dining Hall.

6. The University Physician will give medical supervision and treatment to employees of the University (but not their families) who work in the kitchen, dining hall, dormitories, and dairy.

7. Members of the faculty, clerical force, and students not paying fixed charges shall *not* be entitled to *free* treatment or medical attention by the University Physician or nurse, or to have the use of the Infirmary.

REGULATIONS, GRADES, DEGREES

REGULATION OF STUDIES

Course Numbers. Courses for undergraduates are designated by numbers 1—99; courses for advanced undergraduates and graduates, by numbers 100—199, and courses for graduates, by numbers 200—299.

The letter following the number of a course indicates the semester in which it is offered; thus, course 1f is offered in the first semester; 1s, in the second semester. The letter "y" indicates a full-year course. The number of hours' credit for each course is indicated by the arabic numeral in parentheses following the title of the course.

Schedule of Courses. A semester time schedule of courses, giving days, hours, and rooms is issued as a separate pamphlet at the beginning of each semester.

Definition of Credit Unit. The semester hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one semester. Two or three periods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory or in outside preparation for each credit hour in any course.

Number of Hours. The normal student load is from 15 to 19 semester hours, according to curriculum and year. These variations are shown in the appropriate chapters in Section II describing the several divisions of the University. No student may carry either more or less than the prescribed number of hours without specific permission from the Dean of his College.

EXAMINATIONS AND GRADES

Examinations. Examinations are held at the end of each semester in accordance with the official schedule of examinations. No student is exempted from examination in any course.

Grading. The system of grading is uniform in the different departments and divisions of the University.

The following grade symbols are used: A, B, C, D, E, F, and I. The first four, A, B, C, and D, are passing; E, condition; F, failure; I, incomplete.

Grade A denotes superior scholarship; grade B, good scholarship; grade C, fair scholarship; and grade D, passing scholarship.

A student who receives the grade D in more than one-fourth of the credits required for graduation must take additional courses or repeat courses until he has the required number of credits for a degree, three-fourths of which carry a grade above D.

In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of D will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

A student with the grade of E is conditioned in the course. The grade of E will be changed by a reexamination during the succeeding semester to D or F. The grade cannot be raised to a grade higher than D. Only one reexamination is permitted, and if a student does not remove the condition at the time scheduled for this reexamination the condition becomes a failure. No student is permitted to take a reexamination to remove a condition within four weeks after the condition has been acquired.

The grade of I (Incomplete) is exceptional, and is given only to those students who have a proper excuse for not completing all the requirements of a course. The grade of I is not used to signify work of inferior quality. In cases where this grade is given the student must complete the work assigned by the instructor by the end of the first semester in which that subject is again offered, or the grade becomes F.

Work of grade D, or of any passing grade, cannot be raised to a higher grade except by repeating the course. A student who repeats a course for which he has received credit for work done at this University or elsewhere, must meet all the requirements of the course, including regular attendance, laboratory work, and examinations. His final grade will be substituted for the grade already recorded, but he will not receive any additional credit for the course.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each semester.

ELIMINATION OF DELINQUENT STUDENTS

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health, or to the health of others, or whose conduct is not satisfactory to the authorities of the University. *Students of the last class may be asked to withdraw even though no specific charge be made against them.*

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Arts, Master of Science, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy.

Students in the two-year and three-year curricula are awarded certificates.

The requirements for graduation vary according to the character of work in the different colleges and schools. For full information regarding the requirements for graduation in the several colleges consult the appropriate chapters in Section II.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last thirty credits of any curriculum leading to a baccalaureate degree must be taken in residence at College Park.

At least three-fourths of the credits required for graduation must be earned with grades of A, B, or C.

In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of *D* will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

Each candidate for a degree must file in the Office of the Registrar before March 1st of the year he expects to graduate, a formal application for a degree.

EXPENSES

MAKE ALL CHECKS PAYABLE TO THE UNIVERSITY OF MARYLAND FOR THE EXACT AMOUNT OF THE SEMESTER CHARGES.

In order to reduce the cost of operation, all fees are due and payable as a part of the student's registration, and all persons must come prepared to pay the full amount of the semester charges. No student will be admitted to classes until such payment has been made.

EXPENSES AT COLLEGE PARK

The University reserves the right to make such changes in fees and other costs as any occasion may make necessary. Such changes, however, in comparison with the total cost to the student would be only nominal.

	First	Second	Total
Fixed Charges	$ 62.50	$ 62.50	$125.00
Athletic Fee	15.00		15.00
*Special Fee	10.00		10.00
**Student Activities Fee	10.00		10.00
Minimum Charge to All Students	$ 97.50	$ 62.50	$160.00
Board	135.00	135.00	270.00
Lodging	38.00	38.00	76.00
Laundry	13.50	13.50	27.00
	$284.00	$249.00	$533.00

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*This fee, established by special request of the Student Government Association for a period of eight years, beginning Sept. 1, 1930, is for the purpose of further improving the University grounds and the physical training facilities.

**This fee also is established on request of the Student Government Association. It is to cover certain charges for the student paper, the year book, and the cost of running the Student Government. It is not mandatory.

In addition to the above regular charges the following special fees will be charged as indicated:

$5.00 matriculation fee to students registering for the first time.
$62.50 per semester to non-resident students (except pre-medical and pre-dental students).
$25.00 per semester for resident pre-medical or pre-dental work.
$125.00 per semester to non-resident students taking pre-medical or pre-dental work.
$10.00 diploma fee.
$5.00 certificate fee.
$20.00 graduation fee for Ph. D. degree, including diploma and hood.
$1.00 condition examination fee.
$1.00 fee for change in registration after first week.
$1.00 fee for failure to file schedule card in Registrar's office within one week after opening of semester.
$2.00 fee for failure to report for medical examination at time designated.

Students will be charged for wilful damage to property. Where responsibility for the damage can be fixed, the individual student will be billed for it; where it cannot, the entire student body will be charged a flat fee to cover the loss or damage.

Laboratory Fees as follows:

	Per Semester
Bacteriology:	
Fee for each Laboratory course	$2.00
Chemistry:	
Inorganic Chemistry	4.00
Organic Chemistry	6.00
Physical Chemistry	4.00
Analytical Chemistry	6.00
Agricultural Chemistry	5.00
Industrial Chemistry	5.00
Home Economics:	
Courses in Foods	3.00

Late Registration Fee. Students who do not complete their registration and classification on regular registration days will be required to pay $3.00 extra on the day following the last registration day, and $2.00 for each additional day thereafter until their registration is completed. The maximum fee is $9.00. Students who fail to file course cards in the specified periods in May and January are considered late registrants.

Absence Fee. In cases of absence during a period beginning 24 hours before the close of classes for a vacation or holiday and ending 24 hours after the resumption of classes, a student will be penalized by the payment of a special fee of $3.00 for each class missed. Students will be penalized, as in the case of a holiday, for absence from the first meeting of each class at the beginning of the second semester, unless properly excused.

Students desiring to be excused from classes before and after holidays must make application to the Dean at least one week before such holiday. No excuse for an absence before or after a holiday will be granted, except under the conditions specified. In exceptional cases, such as sickness or death in the family, application for an excuse must be made within one week after a student returns.

Graduate Fees. The fees paid by graduate students are as follows:

Matriculation fee	$10.00
Per semester credit hour	1.50
Diploma fee (Master's degree)	10.00
Graduation fee (Doctor's degree)	20.00

EXPLANATIONS

The Fixed Charges made to all students cover a part of the overhead expenses not provided for by the State.

The **Board, Lodging, and Laundry** charge may vary from semester to semester, but every effort will be made to keep expenses as low as possible.

Fees for Students Entering in February. Students entering the University for the second semester are charged one-half of the following fees: Athletic, Special, and Student Activities.

Fees for Part-Time Students. Undergraduate students carrying six semester hours or less of regularly scheduled courses are charged $3.00 per semester credit and regular laboratory fees. Students carrying seven or more semester hours are charged the regular fees. In the case of special courses with special fees this rule does not apply.

The **Athletic Fee** constitutes a fund which is collected from all students in the University at College Park for the maintenance of athletics, and the entire amount is turned over to the Athletic Director for disbursement. This fund is audited annually by the State Auditors.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents* have been residents of this State† for at least one year.

Adult students are considered to be resident students, if at the time of their registration, they have been residents of this State† for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State†, by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

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* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of and stand in loco parentis to such minor students.

† Students in the College Park Colleges who are residents of the District of Columbia are placed on the same residence basis as students from Maryland.

MISCELLANEOUS INFORMATION

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

Board and lodging may be obtained at boarding houses or in private families, if desired.

Students not rooming in the dormitories may obtain board and laundry at the University at the same rates as those living in the dormitories.

Day students may get lunches at the University cafeteria or at nearby lunch rooms.

The costs of books and supplies and personal needs will vary according to the tastes and habits of the individual student. Books and supplies average about $40.00 per year.

No diploma will be conferred upon, nor any certificate granted to a student who has not made satisfactory settlement of his account.

DORMITORY RULES AND REGULATIONS

The office of the Dormitory Manager is located in Room 121, Silvester Hall. Each dormitory student, after registering, will proceed immediately to the Dormitory Manager's office to receive his room key and take possession of his room. Instructions regarding the rules for the dormitories will be given to the student at this time.

All freshmen boys, except those who live at home, are required to room in the dormitories and board at the University dining hall.

All dormitory property assigned to the individual student will be charged against him, and the parent or guardian must assume responsibility for its possession without destruction other than that which may result from ordinary wear and tear.

All students assigned to dormitories are required to provide themselves with sufficient single blankets, at least two pairs of single sheets, three pillow cases, six towels, a pillow, a laundry bag, a broom, and a waste basket.

Room Reservations. All students who are to room in the dormitories must register their names and selection of rooms with the Dormitory Manager, and deposit $5.00 with the Cashier as a reserve fee. This fee will be deducted from the first semester charges when the student registers; if he fails to register, the fee will be forfeited. Reservations may be made at any time during the closing month of the school year by students already in the University. Students who are applying for admission to the University should signify their desire to reserve a room, and accompany this request with a remittance of $5.00.

Keys. Students who withdraw from the dormitories at any time and fail to surrender their keys to the Dormitory Manager immediately will be subject to a charge of $1.00.

WITHDRAWALS

Students registering for the dormitories and dining hall must continue for the year, as contracts for faculty and other service and for supplies are made on an annual basis, and fees are fixed on the supposition that students will remain for the entire year.

A student desiring to withdraw from the University must secure the written consent of the parent or guardian, to be attached to the withdrawal slip, which must be approved by the Dean and presented to the Registrar at least one week in advance of withdrawal. Charges for full time will be continued against him unless this is done. Withdrawal slips must bear the approval of the President before being presented to the Cashier for refund.

REFUNDS

For withdrawal within five days full refund of fixed charges, library fee, athletic fee, and reserve fee, with a deduction of $5.00 to cover cost of registration. All refunds for board, lodging, and laundry will be prorated.

After five days, and until November 1, refunds on all charges will be pro-rated, with a deduction of $5.00 to cover cost of registration.

After November 1, refunds will be granted for board and laundry only, amounts to be pro-rated.

No refunds will be made without the written consent of the student's parent or guardian, except to students who pay their own expenses.

No student will be given cash for any part of his or her refund until all outstanding checks have been honored by the bank on which they are drawn.

EXPENSES AT BALTIMORE

The fees and expenses for the schools located in Baltimore are as follows:

		Tuition			
	Matriculation	Resident	Non-Resident	Laboratory	Graduation
Medicine	$10.00 (once only)	$350.00	$500.00	$25.00 yr.	$15.00
*Dentistry	10.00 (once only)	250.00	300.00	40.00 yr.	15.00
Pharmacy	10.00 (once only)	200.00	250.00	40.00 yr.	15.00
Law (night)	10.00 (once only)	150.00	200.00	....	15.00
(day)	10.00 (once only)	200.00	250.00	....	15.00

Applicants for admission to any of the schools are charged a record investigation fee of $2.00.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect to earn enough money to pay all his expenses. The amounts vary from nearly nothing to one-half or three-fourths of all the required funds.

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* Students are required to pay, once only, a dissecting fee of $15.00.
Note—Late registration fee, $5.00.

Generally the first year is the hardest for students desiring employment. After the student has demonstrated that he is worthy and capable, there is much less difficulty finding employment.

The University assumes no responsibility in connection with employment. It does, however, maintain a bureau to aid students who desire employment. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of the students.

HONORS AND AWARDS

SCHOLARSHIP HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half.

Scholarship Prizes. Plans are being made for the establishment of certain prizes for scholarship in undergraduate departments and curricula. It is hoped that such plans will be fully matured during the present scholastic year.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the man from Prince George's County who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Phi Sigma Medal. The Delta Chapter of Sigma Phi Sigma Fraternity offers annually a gold medal to that freshman who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to that sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Interfraternity Scholastic Trophy. The Theta Chi Fraternity has presented to the University a silver trophy, which is awarded annually to that fraternity which had the highest average in scholarship for the preceding scholastic year. It becomes the permanent property of the fraternity that wins it three times.

The Kappa Kappa Gamma Sorority offers annually a loan of one hundred dollars ($100.00), without interest, to any woman student registered in the University of Maryland and selected by the Scholarship Committee—the said Committee to be composed of the deans of all Colleges in which girls are registered, including the Dean of Women and the Dean of the Graduate School.

Woman's Senior Honor Society Cup. Offered to the woman member of the senior class who has been in attendance at least three full years, and who has made the highest scholastic average.

Alpha Upsilon Chi Medal. This sorority awards a medal annually to the girl who attains the highest average in academic work during the sophomore year.

PUBLIC SPEAKING AWARDS

President's Cup for Debate. An annual debate is held each year in January between the Poe and New Mercer Literary Societies for the "President's Cup," given by Dr. H. J. Patterson.

MILITARY AWARDS

The Governor's Cup. Offered each year by His Excellency, the Honorable Albert Cabell Ritchie, Governor of Maryland, to the best drilled company.

Military Faculty Award. The Military faculty of the University awards a medal to the student who has done most for the Reserve Officers' Training Corps.

Class of '99 Medal. The Class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

Company Sword. The Class of 1897 awards annually to the captain of the best drilled company of the University battalion a silver-mounted sword.

The Alumni Cup. The Alumni offer a cup each year to the commanding officer of the best drilled platoon.

Scabbard and Blade Saber. This saber is offered for the commander of the winning platoon.

Scabbard and Blade Medal. This medal is offered for the student who remains longest in individual competition.

Gold Medals are offered by the Military Department to the two students who contribute most to the success of the band. Gold medals are offered also to the members of the best drilled squad.

PUBLICATIONS AWARDS

Medals are offered in Diamondback, Reveille, and Old Line work, for the students who have given most efficient and faithful service throughout the year.

ATHLETIC AWARDS

Silvester Medal for Excellence in Athletics. The Class of 1908 offers annually to "the man who typified the best in college athletics" a gold medal. The medal is given in honor of a former President of the University, R. W. Silvester.

Maryland Ring. The Maryland Ring is offered by Charles L. Linhardt to the Maryland man who is adjudged the best athlete of the year.

CITIZENSHIP AWARDS

Citizenship Prize. A gold watch is presented annually by H. C. Byrd, a graduate of the Class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

STUDENT ACTIVITIES

The following description of student activities covers those of the undergraduate divisions at College Park. The description of student activities in the Baltimore divisions is included in the appropriate chapters in Section II.

GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies, for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities, except those which are controlled by a special board or faculty committee, are under the supervision of the Committee on Student Affairs, subject to the approval of the President. Such organizations are formed only with the consent of the Committee on Student Affairs and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students.

A pamphlet entitled *Academic Regulations*, issued annually and distributed to the students in the fall, contains full information concerning student activities as well as a transcript of the rules of the University.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. No student while on probation may represent the University in such events as athletic contests, glee club concerts, dramatic performances, and debates.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably, and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are asked to withdraw. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

Student Government. The Student Government Association consists of two houses—the Executive Council, and the Student Congress—and operates under a constitution. Its officers are a President, a Vice-President, a Secretary, and a Treasurer.

The Executive Council holds meetings the second and fourth Thursday of each month, while the Congress meets but once monthly. The Students' Executive Council, with the aid of the Committee on Student Affairs, which acts as an advisory board to the Council, performs the executive duties incident to managing student affairs.

Women Students' Government Association is an organization comprising all the women students, for the management of all affairs concerning the women students exclusively. It operates under a constitution. Its officers are the same as those of the General Students' Assembly. Its Executive Council has the advisory co-operation of the Dean of Women.

SOCIETIES

Honorary Fraternities. Honorary fraternities and societies in the University at College Park are organized to uphold scholastic and cultural standards in their respective fields. These are: Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Sigma Xi, scientific fraternity; Alpha Zeta, a national honorary agricultural fraternity recognizing scholarship and student leadership; Tau Beta Pi, a national honorary engineering fraternity; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attainments in extra curricular activities and general leadership; Kappa Phi Kappa, a national educational fraternity; Beta Phi Theta, honorary French fraternity; Sigma Delta Pi, a national honorary Spanish fraternity; Alpha Chi Sigma, a national honorary chemical fraternity; Scabbard and Blade, a national military society; Pi Delta Epsilon, a national journalistic fraternity; and the Women's Senior Honor Society, a local organization recognizing conspicuous attainments; Alpha Lambda Delta, a national freshman women's honor society for scholarship attainments; Theta Gamma, a local Home Economics society; Alpha Psi Omega (Iota Chapter), national dramatic society, and Chi Alpha, local women's journalistic fraternity.

Fraternities and Sororities. There are twelve national and two local fraternities, and three national and two local sororities at College Park. These in the order of their establishment at the University are Kappa Alpha, Sigma Phi Sigma, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Alpha Gamma Rho, Theta Chi, Phi Alpha, Tau Epsilon Phi, Alpha Tau Omega, Phi Delta Theta, and Lambda Chi Alpha (national fraternities); and Alpha Omicron Pi, Kappa Kappa Gamma, and Kappa Delta (national sororities); and Iota Nu Delta, Sigma Alpha Mu (local fraternities), and Alpha Upsilon Chi and Delta Xi (local sororities).

Miscellaneous Clubs and Societies. Many clubs and societies, with literary,scientific, social, and other special objectives are maintained in the

University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Authorship Club, Engineering Society, Horticulture Club, Latin American Club, Live Stock Club, New Mercer Literary Society, Poe Literary Society, Calvert Forum, Women's Athletic Association, Girls' "M" Club, Footlight Club, Debating Team, Rossbourg Club, Mathematics Society, Economics Club, Chess Club, Strauss Club, DeMolay Club, Psyche Club, Der Deutsche Verein, and Riding Club.

Student Grange. The Student Grange is a chapter of the National Grange. With the exception of two faculty advisers, the Student Grange membership is made up entirely from the student body. New members are elected by ballot when they have proved their fitness for the organization.

The general purposes of the Student Grange are to furnish a means through which students keep in touch with State and national problems of agricultural, economic, or general educational nature; to gain experience in putting into practice parliamentary rules; to learn the meaning of leadership, and to learn how to assume leadership that aids in the ultimate task of serving in one's community.

RELIGIOUS INFLUENCES

Staff. The University recognizes its responsibility for the welfare of the students, not only as intellectual, but as moral and spiritual beings. Provision is made for their religious needs. A full-time secretary of religious work is employed, who holds the position of General Secretary of the Maryland Christian Association, serving all the students. Student Pastors, representing the major denominational bodies, are officially appointed by the Churches for work with the students of their respective faiths. Each of the Student Pastors is also pastor of a local church of his denomination, which the students are encouraged to attend.

Religious Work Council. The Religious Work Council, comprising the President of the University, acting as Chairman, the Student Pastors, Faculty members, the General Secretary, and prominent students, focalizes, reviews, and stimulates the religious thought and activity of the student body. This Council has an executive secretary with an office in the "Y Hut", who is daily at the service of the students and the churches.

While there is no interference with any one's religion, religion itself is recognized, and every possible provision made that the student may keep in contact with the church of his choice.

Denominational Clubs. The Episcopal Club, the Lutheran Club, the Presbyterian Club, and the Baptist Club are active organizations of the students of their respective denominations (both men and women), and their friends, banded together for mutual fellowship and Christian service.

The Maryland Christian Association. The Maryland Christian Association is a fellowship of students and faculty members, both men and women, who unite for religious fellowship and service. The Association includes the Y. M. C. A. and the Y. W. C. A. of the University, and all students and faculty members are invited to join and to participate in its activities. The Association performs numerous valuable functions upon the campus, such as welcoming and assisting new students, publishing the University "M" book, operating the "Y" Hut, securing speakers, holding religious services, seminars, discussion groups, forums, and social functions. The Association also sponsors the Cosmopolitan Club, which seeks to welcome and to create fellowship between students at the University from every land.

Vespers. Each Sunday evening a Vesper Service is held in the University auditorium, sponsored by the Religious Work Council, which features group singing, Scripture reading, prayer, and a religious message.

STUDENT PUBLICATIONS

Three student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback. A weekly, six page newspaper, the Diamondback, is published by the students. This publication summarizes the University news, and provides a medium for discussion of matters of interest to the students and the faculty.

The Reveille is the student annual, published by the Junior Class. It is a reflection of student activities serving to commemorate the outstanding events of the college year.

The Old Line. A comic magazine put out quarterly by the students.

ALUMNI ORGANIZATION

The alumni are divided into several organizations, which elect representatives to the Alumni Council, an incorporated body which manages all general alumni affairs. Different alumni units represent the Medical School, the Pharmacy School, the Dental School, the Law School, the School of Nursing, while the group of colleges at College Park are represented by one unit. This College Park unit is governed by a board made up of representatives from each of the colleges located at College Park.

The Alumni Council is made up of elected representatives from the several units, with a membership of twenty-four. Each alumni unit in Baltimore elects two representatives to the Council; the alumni representing the College Park group of colleges elect twelve representatives.

SECTION II
Administrative Divisions

COLLEGE OF AGRICULTURE

HARRY J. PATTERSON, *Dean*

Agriculture is the primary pursuit of the human race, and permanent prosperity is in direct proportion to the producing capacity of the land. Land-Grant Colleges were founded to foster the teaching of scientific agriculture. The primary aim of the College of Agriculture of the University of Maryland is to teach the best and most practical methods of farm production, the economics of marketing and distribution, and methods of improving the economic and social position of the farmer. Agriculture is constantly changing; no cropping system can be worked out once and for all time; new as well as old pests and diseases must be constantly combated; better feeding and breeding of live stock and more efficient marketing methods must be substituted for old and inefficient methods if agriculture is to maintain its importance with the other industries. Above all, agriculture must be made profitable to the tiller of the soil and must be established as a paying business for those who engage in it, as well as for town and city dwellers.

The curricula of the College of Agriculture are planned to give the student thorough and practical instruction in agriculture and related sciences, and at the same time afford an opportunity to specialize along the lines in which he is particularly interested. Likewise, instruction is given which will prepare students for teaching positions in agriculture, for governmental investigation and experimental work, for positions as county agents, farm bureau leaders, and farm supervisors, as well as for farming.

Departments

The College of Agriculture includes the following departments: Agricultural Economics; Agronomy (including Crops and Soils); Animal Husbandry; Bacteriology; Botany; Dairy Husbandry; Entomology and Bee Culture; Farm Forestry; Farm Management; Farm Mechanics; Genetics and Statistics; Horticulture (including Pomology, Vegetable Gardening, Landscape Gardening, and Floriculture); Plant Pathology; Plant Physiology and Bio-chemistry; Poultry Husbandry.

Admission

The requirements for admission are discussed under "Entrance," in Section I.

Requirements for Graduation

One hundred and twenty-eight semester hours are required for graduation. The detailed requirements for each department are included in the discussion of Curricula in Agriculture.

Farm and Laboratory Practice

The head of each department will help to make available opportunities for practical or technical experience along his major line of study for each student whose major is in that department and who is in need of such experience. For inexperienced students in many departments this need may be met by one or more summers spent on a practical farm.

Student Organizations

The students of the College of Agriculture maintain a Student Grange, a Horticulture Club, a Livestock Club, and an honor fraternity, Alpha Zeta.

Membership and work in these is voluntary, and no college credits are given for work done in them; yet much of the training obtained in them is fully as valuable as that acquired from regularly prescribed courses.

The Student Grange represents the Great National Farmers fraternity of the Order of Patrons of Husbandry, and in their work they emphasize "Training for Rural Leadership." They sponsor much deputation work in local granges throughout the state. The Horticulture Club sponsors the Horticulture Show in the fall, and the Livestock Club, the Fitting and Showing Contest in the spring. Both of these exhibitions are very creditable University functions. They give valuable training and inspiration to the students.

Alpha Zeta—National Agricultural Honor Fraternity

Membership in this fraternity is chosen from the students in the College of Agriculture after an earnest agricultural motive and executive ability have been demonstrated. This organization fosters good scholarship and to that end awards a gold medal to the member of the freshman class in agriculture who makes the highest record during the year.

Fellowships

A limited number of graduate fellowships, which carry remuneration of $500 to $1000 yearly, are available to graduate students. Students who hold these fellowships spend a portion of their time assisting in classes and laboratories. The rest of the time is used for original investigation or assigned study. (See Graduate School.)

Curricula in Agriculture

Students who register in the College of Agriculture, and expect to specialize in Botany, Entomology, or Landscape Gardening, follow a special curriculum during the entire four years of their college course. Those who expect to specialize in Bacteriology or Entomology begin specialization in the sophomore year. All others follow the same curriculum during the freshman and sophomore years. At the end of the sophomore year they may elect to specialize along the lines in which they are particularly interested.

With the advice and consent of his advisor and the dean, any student may make such modifications in his curriculum as are deemed advisable to meet the requirements of his particular case. However, in requesting any change one should be guided by the fact that, according to past records, one who does not return to the farm is likely to engage in either teaching and research or business and commercial pursuits. Those students who desire to enter teaching or research positions for which graduate study is essential should lay a broad foundation in the fundamental sciences. Also, those who desire to enter business or commercial pursuits should take a broad general course rather than a narrow specialized one.

Freshman Year	*Semester* I	II
General Chemistry (Chem. 1y)	4	4
*General Zoology (Zool. 1s)	—	4
*General Botany (Bot. 1f)	4	—
Composition and Rhetoric (Eng. 1y)	3	3
General Animal Husbandry (A. H. 1f)	3	—
Principles of Vegetable Culture (Hort. 11 s)	—	3
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 1y)	1	1
	16	16

Sophomore Year	I	II
‡Elements of Organic Chemistry (Chem. 12f)	4	—
‡Agricultural Chemical Analysis (Chem. 13 s)	—	3
Geology (Geol. 1f)	3	—
Soils and Fertilizers (Soils 1 s)	—	5
Elementary Pomology (Hort. 1f)	3	—
Cereal and Forage Crop Production (Agron, 1f and 2 s)	3	3
Feeds and Feeding (A. H. 2f)	3	—
Farm Dairying (D. H. 1 s)	—	3
Basic R. O. T. C. (M. I. 2y)	2	2
	18	16

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* Offered each semester.

‡ Students specializing in Agricultural Economics will substitute for chemistry the following courses:

Fundamentals of Economics (Econ. 5 s)	—	3
Agricultural Industry and Resources (A. E. 1f)	3	—

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

(For special requirements and curriculum see page 110, College of Education.)

AGRONOMY

In the Department of Agronomy are grouped the courses in farm crops, soils, and plant breeding.

The curriculum in farm crops aims to give the student the fundamental principles of crop production. Special attempt is made to adapt the work to the young man who wishes to apply scientific principles of field crop culture and improvement on the farm. At the same time enough freedom is given the student in the way of electives so that he may register for subjects which might go along with the growing of crops on his particular farm. A student graduating from the course in agronomy should be well fitted for general farming, investigational work in the State or Federal Experiment Stations, or county agent work.

The division of soils gives instruction in the physics, chemistry, and biology of the soil, the courses being designed to equip the future farmer with a complete knowledge of his soil and also to give adequate training to students who desire to specialize in soils. Students who are preparing to take up research or teaching are expected to take graduate work in addition to the regular undergraduate courses that are offered. The division possesses the necessary equipment and facilities for the instruction in these subjects, and in addition affords opportunities for the student to come in contact with the research at the Agricultural Experiment Station, especially in the pot culture laboratories, and on the experimental fields at the station and in other parts of the State.

Graduate students will find unusual opportunities to fit themselves for teaching soils in agricultural colleges, to conduct research in experiment stations, and to carry on work with the Bureau of Soils, United States Department of Agriculture.

Crops Division

Junior Year	*Semester* I	II
Genetics (Gen. 101f)	3	—
Grain and Hay Judging (Agron. 4f)	1	—
Grading Farm Crops (Agron. 3 s)	—	2
General Bacteriology (Bact. 1f)	4	—
Soil Micro-Biology (Soils 104 s)	—	3

	Semester I	Semester II
Expository Writing (Eng. 5f and 6 s)	2	2
Elementary Plant Physiology (Plt. Phy. 1f)	4	—
Fundamentals of Economics (Econ. 5 s)	—	3
Electives	2	6
	16	16

Senior Year

	I	II
Crop Breeding (Agron. 103f)	2	—
Advanced Genetics (Gen. 102 s)	—	2
Agricultural Economics (A. E. 2f)	3	—
Methods of Crop and Soil Investigations (Agron. 121 s)	—	2
Cropping Systems and Methods (Agron. 120 s)	—	2
Soil Geography (Soils 3f)	3	—
Farm Drainage (F. Mech. 107 s)	—	2
Farm Machinery (F. Mech. 101f)	3	—
Farm Forestry (Forestry 1 s)	—	3
Farm Management (F. M. 2f)	4	—
Electives	1	5
	16	16

Soils Division

Junior Year

	I	II
Expository Writing (Eng. 5f and 6 s)	2	2
Fundamentals of Economics (Econ. 5 s)	—	3
General Bacteriology (Bact. 1f)	4	—
Soils and Fertilizers (Soils 1f)	5	—
Soil Management (Soils 2 s)	—	3
Elementary Plant Physiology (Plt. Phy. 1f)	4	—
Cropping Systems and Methods (Agron. 120 s)	—	2
Electives	1	6
	16	16

Senior Year

	I	II
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2f)	4	—
Methods of Crop and Soil Investigations (Agron. 121 s)	—	2
Soil Geography (Soils 3f)	3	—
Farm Drainage (F. Mech. 107 s)	—	2
Electives	6	12
	16	16

ANIMAL HUSBANDRY

The courses in animal husbandry have been developed with the idea of teaching the essential principles underlying the breeding, feeding, development, and management of livestock, together with the economics of the livestock industry.

The curriculum in animal husbandry is so planned as to allow plenty of latitude in the selection of courses outside of the department, thus giving the student a broad, fundamental training and fitting him to become the owner or superintendent of general or specialized livestock farms.

Opportunity for specialization is offered to those who may desire to become instructors or investigators in the field of animal husbandry.

Some livestock are maintained at the University. In addition, there are available, for use in instruction, the herds of livestock owned by the Federal Bureau of Animal Industry at Beltsville, Maryland. Through the courtesy of Maryland breeders, some private herds are also available for inspection and instruction.

Junior Year

	Semester I	Semester II
Expository Writing (Eng. 5f and 6 s)	2	2
General Bacteriology (Bact. 1f)	4	—
Pathogenic Bacteriology (Bact. 2 s)	—	4
Fundamentals of Economics (Econ. 5 s)	—	3
Principles of Breeding (A. H. 3 s)	—	3
Swine Production (A. H. 4 s)	—	3
Comparative Anatomy and Physiology (Bact. 106f)	3	—
Genetics (Gen. 101f)	3	—
Electives	4	1
	16	16

Senior Year

	I	II
Agricultural Economics (A. E. 2f)	3	—
Sheep Production (A. H. 7 s)	—	3
Farm Machinery (F. Mech. 101f)	3	—
Animal Hygiene (Bact. 120 s)	—	3
Meat and Meat Products (A. H. 8f)	2	—
Farm Drainage (F. Mech. 107 s)	—	2
General Physiological Chemistry (Chem. 108 s)	—	4
Electives	8	4
	16	16

BACTERIOLOGY AND PATHOLOGY

The present organization of this department has been brought about with two main purposes in view. The first is to give all the students of the University an opportunity to obtain a general knowledge of this basic subject. The second purpose, and one for which this curriculum was designed, is to fit students for positions along bacteriological lines. These include the work of dairy bacteriologists and inspectors; soil bacteriologists; federal, state, and municipal bacteriologists for public health positions, research positions, commercial positions, etc. The demand for persons qualified for this work is usually much greater than the supply.

Sophomore Year	*Semester* *I*	*II*
Elements of Organic Chemistry (Chem. 8f or 12f)	5 or 4	—
Quantitative Analysis (Chem. 4s)	—	4
*Special Applications of Physics (Phys. 3 s) or Fundamentals of Economics (Econ. 5 s)	—	4 or 3
General Bacteriology (Bact. 1f)	4	—
Pathogenic Bacteriology (Bact. 2 s)	—	4
R. O. T. C. (M. I. 2y)	2	2
Electives	5 or 6	2 or 3
	16	16

Junior Year		
Dairy Bacteriology (Bact. 101f)	3	—
Dairy Bacteriology (Bact. 102 s)	—	3
Expository Writing (Eng. 5f and 6 s)	2	2
Serology (Bact. 104f)	4	—
Hematology (Bact. 103f)	2	—
Sanitary Bacteriology (Bact. 112 s)	—	3
Urinalysis (Bact. 107 s)	—	2
Electives	5	6
	16	16

Senior Year		
Bacteriological Problems (Bact. 121f)	4	—
Bacteriological Problems (Bact. 122 s)	—	4
General Physiological Chemistry (Chem. 108 s)	—	4
Genetics (Gen. 101f)	3	—
Statistics (Gen. 111f)	2	—
Seminar (Bact. 130f)	1	—
Seminar (Bact. 131s)	—	1
Electives	6	7
	16	16

BOTANY

The courses listed for the curriculum in botany make a kind of skeleton of essentials, to which the student adds the individual requirements to make a complete four-year course. No electives are permitted in the freshman year, but thereafter the leeway increases to the senior year, in which all of the courses are elected or selected to fit the individual needs of the student. This leeway is thought to be important because all students do not have the same ends in view. They may wish to prepare for teaching, investigational work in state or government experiment stations, governmental inspection, or any other vocations which botanists follow. The curriculum as outlined lays the foundation for graduate work leading to higher degrees.

Freshman Year	*Semester* *I*	*II*
General Botany (Bot. 1f and 2 s)	4	4
General Chemistry (Chem. 1y)	4	4
Composition and Rhetoric (Eng. 1y)	3	3
Reading and Speaking (P. S. 1y)	1	1
Modern Language (French or German)	3	3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 2y and 4y)	1	1
	16	16

Sophomore Year		
Diseases of Plants (Plt. Path. 1f)	4	—
Local Flora (Bot. 3s)	—	2
General Zoology (Zool. 1s)	—	4
Elements of Organic Chemistry (Chem. 12f)	4	—
Algebra and Plane Trigonometry (Math. 1f and 2s)	3	3
Modern Language	3	3
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 6y and 8y)	2	2
Electives	—	2
	16	16

Junior Year		
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
General Physics (Phys. 1y)	4	4
General Bacteriology (Bact. 1f)	—	4
Expository Writing (Eng. 5f and 6s)	2	2
Electives	6	6
	16	16

Senior Year		
Genetics (Gen. 101f)	3	—
Botanical Electives (Maximum)	7	10
Other Electives (Minimum)	6	6
	16	16

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* Only those students who are excused from Physics will take Economics.

DAIRY AND ANIMAL HUSBANDRY

Dairy Husbandry

The Department of Dairy Husbandry offers courses in two major lines; namely, dairy production and dairy manufacture. The curriculum in each of these lines is so arranged as to give the student an intimate knowledge of the science and facility in the art of dairy husbandry practice. The dairy production option is organized to meet the specific requirements of students who are especially interested in the care, feeding, breeding, management, and improvement of dairy cattle and in the production and sale of market milk.

The option in dairy manufactures is planned to meet the particular demands of students who are especially interested in the processing and distribution of milk, in dairy plant operation, and in the manufacture and sale of butter, cheese, ice-cream, and other milk products.

The dairy herd and the dairy laboratories are available to students for instruction and for research. Excellent opportunity is, therefore, afforded to both advanced undergraduate and graduate students for original investigation and research. Graduates in the courses in dairy husbandry should be well qualified to become managers of dairy farms, teachers, investigators in the State and Federal Agricultural Experiment Stations, or to enter the field of commercial dairying.

DAIRY HUSBANDRY

Dairy Manufacture

	Semester	
Junior Year	*I*	*II*
Expository Writing (Eng. 5f and 6 s)	2	2
Fundamentals of Economics (Econ. 5 s)	—	3
General Bacteriology (Bact. 1f)	4	—
Introductory Accounting (Econ. 109y)	3	3
Dairy Chemistry (Chem. 106s)	—	4
Dairy Manufacturing (D. H. 4f and s)	3	3
Market Milk (D. H. 5f)	4	—
Electives	—	1
	16	16
Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Market Milk (D. H. 5f)	4	—
Dairy Manufacturing (D. H. 4y)	3	3
Dairy Bacteriology (Bact. 101f)	3	—
Dairy Plant Technique (D. H. 7s)	—	2
Marketing of Farm Products (A. E. 102s)	—	3
Co-operation in Agriculture (A. E. 103f)	3	—
Electives	1	7
	17	15

Dairy Production

	Semester	
Junior Year	*I*	*II*
Expository Writing (Eng. 5f and 6s)	2	2
Fundamentals of Economics (Econ. 5s)	—	3
General Bacteriology (Bact. 1f)	4	—
Dairy Production (D. H. 2f)	3	—
Principles of Breeding (A. H. 3s)	—	3
Advanced Dairy Cattle Judging (D. H. 3s)	—	1
Genetics (Gen. 101f)	3	—
Farm Drainage (F. Mech. 107s)	—	2
Electives	4	5
	16	16
Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Market Milk (D. H. 5f)	4	—
Dairy Bacteriology (Bact. 101f)	3	—
Animal Hygiene (Bact. 120s)	—	3
Electives	6	13
	16	16

ENTOMOLOGY

This department is concerned with the teaching of entomology to all agricultural students as a basis for future work in pest control, in the preparation of technically trained entomologists, and in furnishing courses to students in Arts and Sciences and Education.

The success of the farmer and particularly the fruit grower is in a large measure dependent upon his knowledge of the methods of preventing or combating the pests that menace his crops each year. Successful methods of control are emphasized in the economic courses.

There is an ever-increasing demand for trained entomologists. The fact that the entomological work of the Experiment Station, the Extension Service, the College of Agriculture, and the office of the State Entomologist are in one administrative unit, enables the student in this department to avail himself of the many advantages accruing therefrom. Advanced students have special advantages in that they may be assigned to work on Station projects already under way. The department takes every advantage of the facilities offered by the Bureau of Entomology of the U. S. Department of Agriculture, the National Museum, Smithsonian Institution, various other local laboratories, the libraries in Washington, and the Washington Entomological Society. Thus students are given many opportunities of meeting authorities in the various fields of entomology, to observe projects under way, consult collections, and hear addresses on every phase of entomology. Following is the suggested curriculum in Entomology. It can be modified to suit individual demand. Students not starting this curriculum in their freshman year can with a few changes in schedule meet the requirements in the four years.

	Semester	
Freshman Year	*I*	*II*
General Chemistry (Chem. 1y)	4	4
General Zoology (Zool. 1f)	4	—
General Botany (Bot. 1s)	—	4
Introductory Entomology (Ent. 1f)	3	—
Insect Biology (Ent. 3s)	—	3
Composition and Rhetoric (Eng. 1y)	3	3
Basic R. O. T. C.	1	1
	15	15

Sophomore Year		
Elements of Organic Chemistry (Chem. 12f)	4	—
Agricultural Chemical Analysis (Chem. 13s)	—	3
Insect Morphology and Taxonomy (Ent. 2y)	3	3
French or German (1y)	3	3
Expository Writing (Eng. 5f and 6s)	2	2
Basic R. O. T. C. (M. I. 2y)	2	2
Electives	3	4
	17	17

Junior Year		
*Economic Entomology (Ent. 101y)	3	3
Diseases of Plants (Plt. Path. 1f)	4	—
General Bacteriology (Bact. 1s)	—	4
French or German (3y)	3	3
Electives	6	6
	16	16

Senior Year		
*Insect Pests of Special Groups (Ent. 104y)	3	3
Seminar (Ent. 103y)	1	1
Special Problems (Ent. 4f or s)	2	2
Electives	10	10
	16	16

Electives in physics, zoology, plant pathology, plant physiology, plant taxonomy, genetics, statistics, and modern languages are urged as especially desirable.

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* Courses taken by both juniors and seniors in alternate years.

FARM MANAGEMENT AND AGRICULTURAL ECONOMICS

Farm management has been defined as the business of the individual farmer so to organize his business as to produce the greatest continuous profit. This can be done, however, only when the organization is in accordance with the broader principles of agricultural economics. It requires not only knowledge of many factors involved in the production of crops and animals, but also administrative ability to co-ordinate them into the most efficient farm organization. Farming is a business, and as such demands for its successful conduct the use of business methods. As a prerequisite to the technical farm management course there is offered a course in farm accounting. This course is not elaborate, but is designed to meet the need for a simple yet accurate system of farm business records.

The aim of the farm management course is to assist the student to perceive the just relationship of the several factors of production and disposition as applicable to local conditions, and to develop in him executive and administrative capacity.

Agricultural economics considers the fundamental principles underlying production, distribution, and consumption, more especially as they bear upon agricultural conditions. Land, labor, and capital are considered in their relationship to agriculture.

The farmer's work does not end with the production of crops or animal products. More and more it is evident that economical distribution is as important a factor in farming as is economical production.

Students well trained in farm management and agricultural economics are in demand for county agent work, farm bureau work, experiment station or United States Government investigation, and college or secondary school teaching.

	Semester	
Junior Year	*I*	*II*
Agricultural Economics (A. E. 2f)	3	—
Marketing of Farm Products (A. E. 102s)	—	3
Farm Accounting (F. M. 1s)	—	3
Business Law (Econ. 107f and 108s)	3	3
Grading Farm Crops (Agron. 3s)	—	2
Business Organization and Operation (Econ. 105f)	2	—
Statistics (Gen. 111f and 112s)	2	2
Expository Writing (Eng. 5f and 6s)	2	2
Electives	4	1
	16	16

Senior Year	Semester I	Semester II
Co-operation in Agriculture (A. E. 103f)	3	—
Transportation of Farm Products (A. E. 101s)	—	3
Seminar (A. E. 202y)	1–3	1–3
Farm Management (F. M. 2f)	4	—
Farm Machinery (F. Mech. 101f)	3	—
Agricultural Finance (A. E. 104s)	—	3
Rural Life and Education (Ag. Ed. 106 s)	—	3
Money and Credit (Econ. 101f)	2	—
Electives	1-3	4-6
	16	16

FARM MECHANICS

The Department of Farm Mechanics is organized to offer students of agriculture training in those agricultural subjects which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery, farm buildings, and farm drainage.

The modern tendency in farming is to replace hand labor, requiring the use of many men, by large machines, which do the work of many men yet require only one man for their operation. In many cases horses are being replaced by tractors to supply the motive force for these machines. Trucks, automobiles, and stationary engines are found on almost every farm. It is highly advisable that the student of any branch of agriculture have a working knowledge of the construction and adjustments of these machines.

More than one-fourth of the total value of Maryland farms is invested in the buildings. The study of the design of the various buildings, from the standpoint of convenience, economy, sanitation, and appearance, is, therefore, important.

The study of drainage includes the principles of tile drainage, the laying out and construction of tile drain systems, the use of open ditches, and a study of the Maryland drainage laws.

GENERAL AGRICULTURE

Those who do not care to specialize in any particular phase of agriculture will pursue the following curriculum:

Junior Year	Semester I	Semester II
Diseases of Plants (Plt. Path. 1f)	4	—
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
General Bacteriology (Bact. 1f)	4	—
Expository Writing (Eng. 5f and 6s)	2	2
Farm Poultry (P. 101s)	—	3
Genetics (Gen. 101f)	3	—
Farm Accounting (F. M. 1s)	—	3
Principles of Breeding (A. H. 3s)	—	3
Fundamentals of Economics (Econ. 5s)	—	3
Electives	—	2
	17	16

Senior Year	Semester I	Semester II
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2f)	4	—
Farm Machinery (F. Mech. 101f)	3	—
Gas Engines, Tractors, and Automobiles (F. Mech. 102s)	—	3
Cropping Systems and Methods (Agron. 120s)	—	2
Farm Drainage (F. Mech. 107s)	—	2
Farm Forestry (Forestry 1s)	—	3
Electives	6	6
	16	16

GENETICS AND STATISTICS

Rapid accumulation of knowledge in the field of genetics has revolutionized the viewpoint of those interested in plant and animal breeding and in eugenics.

Teachers and investigators have increasing occasion to interpret statistical data presented by others, as well as to gather and organize original material.

The Department of Genetics and Statistics offers students training in (1) the principles of heredity and genetics, and (2) the tools and methods employed in statistical description and induction.

HORTICULTURE

There are several reasons why the State of Maryland should be preeminent in the different lines of horticulture and offer such excellent opportunities for horticultural enterprises. A few of the more evident ones are the wide variation in soil and climate from the Eastern Shore to the mountainous counties of Allegheny and Garrett in the west, the nearness to all of the large Eastern markets, and the large number of railroads, interurban lines, and waterways, all of which combine to make marketing easy and comparatively cheap.

The Department of Horticulture offers four major lines of work; namely, pomology, olericulture, floriculture, and landscape gardening. Students wishing to specialize in horticulture can arrange to take a general course during the four years, or enough work is offered in each division to allow students to specialize during the last two years in any of the four divisions. The courses have been planned to cover such subject matter that upon their completion students should be fitted to engage in commercial work, or county agent work, or for teaching and investigational work in the State and Federal institutions.

The department has at its disposal near the college about ten acres of ground devoted to vegetable gardening, eighteen acres of orchards, small fruits, and vineyards, and twelve greenhouses, in which flowers and forcing crops are grown. One building on the campus is devoted to horticultural teaching and research. In addition to the land near the college, the department has acquired 270 acres of land, about three miles from the college, which is being used for experimental and teaching purposes. Members of the teaching staff are likewise members of the experiment station staff, and hence students have an opportunity to become acquainted with the research which the department is carrying on. Excellent opportunity for investigating new problems is afforded to advanced under-graduates and to graduate students.

Students who intend to specialize in pomology or olericulture are required to take the same subjects which other agricultural students take during the first two years. Students who specialize in floriculture or landscape gardening, however, will take slightly different curricula. It is felt that such students require certain special courses, which it is unnecessary to require of all agricultural students. The curricula follow:

Pomology

	Semester	
Junior Year	*I*	*II*
Fundamentals of Economics (Econ. 5s)	—	3
Systematic Pomology (Hort. 2f)	3	—
Small Fruit Culture (Hort. 4s)	—	2
Fruit and Vegetable Judging (Hort. 5f)	2	—
Expository Writing (Eng. 5f and 6s)	2	2
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
Diseases of Plants (Plt. Path. 1f)	4	—
Introductory Entomology (Ent. 1s)	—	3
Genetics (Gen. 101f)	3	—
Electives	—	5
	18	15

Senior Year		
Commercial Fruit Growing (Hort. 101f)	3	—
Economic Fruits of the World (Hort. 102f)	2	—
Horticultural Seminar (Hort. 43y)	1	1
General Landscape Gardening (Hort. 31s)	—	2
General Floriculture (Hort. 21f)	2	—
Farm Management (F. M. 2f)	4	—
Horticultural Breeding Practices (Hort. 41s)	—	1
Horticultural Research and Thesis (Hort. 42y)	2	2
Electives	2	10
	16	16

Olericulture

	Semester	
Junior Year	*I*	*II*
Fundamentals of Economics (Econ. 5s)	—	3
Small Fruit Culture (Hort. 4s)	—	2
Diseases of Plants (Plt. Path. 1f)	3	—
Genetics (Gen. 101f)	3	—
Expository Writing (Eng. 5f and 6s)	2	2
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
Fruit and Vegetable Judging (Hort. 5f)	2	—
Truck Crop Production (Hort. 12f)	3	—
Vegetable Forcing (Hort. 13s)	—	3
Introductory Entomology (Ent. 1s)	—	3
Electives	—	2
	17	15

Senior Year		
Farm Management (F. M. 2f)	4	—
General Landscape Gardening (Hort. 31s)	—	2
General Floriculture (Hort. 21f)	2	—
Horticultural Breeding Practices (Hort. 41s)	—	1
Tuber and Root Crops (Hort. 103f)	2	—
Systematic Olericulture (Hort. 105f)	3	—
Advanced Truck Crop Production (Hort. 104s)	—	2
Horticultural Research and Thesis (Hort. 42y)	2	2
Horticultural Seminar (Hort. 43y)	1	1
Electives	2	8
	16	16

Floriculture

Sophomore Year		
Elements of Organic Chemistry (Chem. 12f)	4	—
Agricultural Chemical Analysis (Chem. 13s)	—	3
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
Geology (Geol. 1f)	3	—
Soils and Fertilizers (Soils 1s)	—	3
General Landscape Gardening (Hort. 31s)	—	2
Elementary Pomology (Hort. 1f)	3	—
Basic R. O. T. C. (M. I. 2y)	2	2
Electives	—	6
	16	16

Junior Year	*Semester* I	II
*Greenhouse Management (Hort. 22y)	3	3
Floricultural Practice (Hort. 23y)	2	2
Floricultural Trip (Hort. 27s)	—	1
*Greenhouse Construction (Hort. 24s)	—	2
*Garden Flowers (Hort. 26f)	3	—
Expository Writing (Eng. 5f and 6s)	2	2
Fundamentals of Economics (Econ. 5s)	—	3
Diseases of Plants (Plt. Path. 1f)	4	—
Local Flora (Bot. 3s)	—	2
Elements of Landscape Design (Hort. 32f)	3	—
Electives	—	1
	—	—
	17	16

Senior Year		
*Commercial Floriculture (Hort. 25y)	3	3
Plant Materials (Hort. 106y)	2	3
Vegetable Forcing (Hort. 13s)	—	3
Agricultural Economics (A. E. 2f)	3	—
Horticultural Breeding Practices (Hort. 41s)	—	1
Horticultural Seminar (Hort. 43y)	1	1
Horticultural Research and Thesis (Hort. 42y)	2	2
Electives	5	3
	—	—
	16	16

Landscape Gardening

Freshman Year		
General Chemistry (Chem. 1y)	4	4
General Zoology (Zool. 1f)	4	—
General Botany (Bot. 1 s)	—	4
Composition and Rhetoric (Eng. 1y)	3	3
Reading and Speaking (P. S. 1y)	1	1
Algebra (Math. 1f); Plane Trigonometry (Math. 2 s)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
	—	—
	16	16

Sophomore Year		
French or German	3	3
Elementary Plant Physiology (Plt. Phys. 1f)	4	—
Geology (Geol. 1f)	3	—

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* Courses taken by both juniors and seniors in alternate years.

	Semester I	II
Soils and Fertilizers (Soils 1 s)	—	3
Surveying (Surv. 1f)	1	—
*General Landscape Gardening (Hort. 31 s)	—	2
Expository Writing (Eng. 5f and 6 s)	2	2
Engineering Drafting (Dr. 1y)	1	1
Basic R. O. T. C. (M. I. 2y)	2	2
Electives	—	3
	—	—
	16	16

Junior Year		
Elementary Pomology (Hort. 1f)	3	—
†Plant Materials (Hort. 106y)	2	3
†History of Landscape Gardening (Hort. 35f)	1	—
*Elements of Landscape Design (Hort. 32f)	3	—
†Landscape Design (Hort. 33s)	—	3
†Garden Flowers (Hort. 26f)	3	—
Fundamentals of Economics (Econ. 5s)	—	3
Diseases of Plants (Plt. Path. 1f)	3	—
Systematic Botany (Bot. 3 s)	—	2
Farm Drainage (F. Mech. 107 s)	—	2
Electives	1	3
	—	—
	16	16

Senior Year		
†Landscape Design (Hort. 34f)	3	—
†Landscape Construction and Maintenance (Hort. 36s)	—	1
†Civic Art (Hort. 37 s)	—	2
Horticultural Research and Thesis (Hort. 42y)	2	2
Horticultural Seminar (Hort. 43y)	1	1
Electives	10	10
	—	—
	16	16

POULTRY HUSBANDRY

The course in Poultry Husbandry is designed to give the student a broad and comprehensive view of the practices of poultry raising. Those students who expect to develop into teachers, extension workers, or investigators should choose as electives such subjects as psychology, economic history, sociology, philosophy, political science, and kindred subjects.

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* Courses taken by both sophomores and juniors in alternate years.

† Courses taken by both juniors and seniors in alternate years.

	Semester	
Junior Year	*I*	*II*
Poultry Production (Poultry 103 s)	—	4
Expository Writing (Eng. 5f and 6 s)	2	2
General Bacteriology (Bact. 1f)	4	—
Pathogenic Bacteriology (Bact. 2s)	—	4
Genetics (Gen. 101f)	3	—
Poultry Keeping (Poultry 102f)	4	—
Fundamentals of Economics (Econ. 5 s)	—	3
Electives	3	3
	16	16

Senior Year		
Agricultural Economics (A. E. 2f)	3	—
Farm Management (F. M. 2f)	4	—
Farm Accounting (F. M. 1 s)	—	3
Animal Hygiene (Bact. 120 s)	—	3
Poultry Breeds (Poultry 104 f)	4	—
Poultry Management (Poultry 105 s)	—	4
Marketing of Farm Products (A. E. 102 s)	—	3
Electives	5	3
	16	16

SPECIAL STUDENTS IN AGRICULTURE

Mature students who have fulfilled the regular college entrance requirements and are not candidates for degrees may, on consent of the dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of each individual. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive cards granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruit-growers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

In case such persons find it possible to remain in attendance for a full semester or for a full year, they may arrange to audit (that is, to attend regularly without credit) a full schedule of studies in the Agricultural College.

The regular charges are *$5.00 for registration and $1.00 per week for the time of attendance.

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* One registration is good for any amount of regular or intermittent attendance during a period of four years.

COMBINED PROGRAM IN AGRICULTURE AND VETERINARY MEDICINE

By arrangement with the Veterinary School of the University of Pennsylvania, students who wish to specialize in veterinary medicine may pursue a combined six year program of study. The first three years of this program are taken at College Park. The last three years are taken at the Veterinary School of the University of Pennsylvania. After successful completion of the three years' work at the University of Maryland and the first year's work at the University of Pennsylvania, the student receives his B. S. degree from the University of Maryland. After successful completion of the last two years' work at the University of Pennsylvania he receives his degree in Veterinary Medicine from the Veterinary School.

AGRICULTURAL EXPERIMENT STATION

HARRY J. PATTERSON, *Director*.

The agricultural work of the University naturally comprises three fields: research, instruction, and extension. The Agricultural Experiment Station is the research agency of the University, which has for its purpose the increase of knowledge relating to agriculture, primarily for the direct benefit of the farmer. It is also the real source of agricultural information for use in the classroom and for demonstrations in the field.

The Experiment Station work is supported by both State and Federal appropriations. The Hatch Act, passed by Congress in 1887, appropriates $15,000 annually; the Adams Act, passed in 1906, provides $15,000 annually; and the Purnell Act, passed in 1925, provides $60,000 annually. The State appropriation for 1930 is $74,000.

The objects, purposes, and work of the Experiment Stations as set forth by these acts are as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories."

The Purnell Act also permits the appropriation to be used for conducting investigations and making experiments bearing on the manufacture, preparation, use, distribution, and marketing of agricultural products, and for such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life.

The Maryland Station, in addition to the work conducted at the University, operates a sub-station farm of fifty acres at Ridgely, Caroline County, and a farm of about sixty acres at Upper Marlboro for tobacco investigations. Experiments in co-operation with farmers are conducted at many different points in the State. These tests consist of studies with soils, fertilizers, crops, orchards, insect and plant disease control, and stock feeding.

The results of the Experiment Station work during the past quarter of a century have developed a science of agriculture to teach, and have laid a broad and substantial foundation for agricultural development. The placing of agricultural demonstrations and extension work on a national basis has been the direct outgrowth of the work of the Experiment Stations.

The students taking courses in agriculture are kept in close touch with the investigations in progress.

EXTENSION SERVICE

T. B. Symons, *Director*

The Extension Service is that branch of the University of Maryland, established by Federal and State law, which is designed to assist the farmer and his family in promoting the prosperity and welfare of agriculture and rural life. Its work is conducted in co-operation with the United States Department of Agriculture.

The Extension Service is represented in each county of the State by a county agent and a home demonstration agent. Through these agents and its staff of specialists, the Extension Service comes into intimate contact with rural people and with the problems of the farm and home.

Practically every phase of agriculture and rural home life comes within the scope of the work undertaken by the Extension Service. Farmers are supplied with details of crop and livestock production, and with instructions for controlling disease and insect pests; they are encouraged and aided in organized effort, helped with marketing problems, and in every way possible assisted in improving economic conditions on the farm.

Rural women are likewise assisted in the problems of the home. They are made acquainted with time- and labor-saving devices, with simpler and easier methods of work, with new knowledge of foods, with new ideas about home furnishing, with practical methods of home sewing and millinery construction, and with such other information as tends to make rural home life attractive and satisfying.

For rural boys and girls, the Extension Service provides a valuable type of instruction in agriculture and home economics through its 4-H Club work. The instruction is incident to actual demonstrations conducted by the boys and girls themselves. These demonstrations, under supervision of the county and home demonstration agents, are the best possible means of imparting to youthful minds valuable information in crop and livestock production and in the household arts. The 4-H Club work, moreover, affords rural boys and girls a very real opportunity to develop the qualities of self-confidence, perseverance, and leadership.

The Extension Service works in accord with all other branches of the University of Maryland and with all agencies of the United States Department of Agriculture. It co-operates with all farm and community organizations in the State which have as their major object the improvement of agriculture and rural life; and it aids in every way possible in making effective the regulatory work and other measures instituted by the State Board of Agriculture.

The Extension Service is gradually developing activities in the general adult educational field.

COLLEGE OF ARTS AND SCIENCES

T. H. Taliaferro, *Dean*

The College of Arts and Sciences provides four years of liberal training in biological sciences, economics and business administration, history, languages and literature, mathematics, philosophy, physical sciences, political science, psychology, and sociology. It thus affords an opportunity to acquire a general education which shall serve as a foundation for success in whatever profession or vocation the student may choose. In particular it prepares the ground and lays the foundation for the learned professions of law, medicine, theology, teaching, and even the more technical professions of engineering, public health service, and business administration. Through the aid which it furnishes other colleges of the University it aims to give the students of these colleges the broad outlook necessary for liberal culture and for public service.

This College is a development of the Division of Language and Literature of the Maryland State College, and later of the School of Liberal Arts of the University. In 1921 the School of Liberal Arts, the School of Chemistry, and other departments of physical and biological sciences were combined into the present College of Arts and Sciences, which thus became a standardized College of Arts and Sciences.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are in general the same as those for admission to the other colleges and schools of the University. See section I, "Entrance."

For admission to the pre-medical curriculum two years of any one foreign language in addition to the regularly prescribed units are required. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum will be found under the School of Medicine.

Departments

There are eleven university departments under the administrative control of the College of Arts and Sciences: Classical Languages, Chemistry, Economics and Sociology, English, History and Political Science, Mathematics, Modern Languages, Philosophy, Physics, Public Speaking, and Zoology and Aquiculture. In addition to these, there are other departments, which, although they are under the control of other colleges of the University, furnish instruction for the College of Arts and Sciences. They are:

Bacteriology, Botany, Entomology, Geology, Military Science, Physical Education, and Psychology. Students in this college are also permitted to elect courses in the Colleges of Agriculture, Education, Engineering, and Home Economics as indicated on page 90.

Degrees

The degrees conferred upon students who have met the prescribed conditions for degrees in the College of Arts and Sciences are Bachelor of Arts and Bachelor of Science.

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied all entrance requirements and has secured credit for a minimum of 127 credit hours, including six hours of military science for all able-bodied men students, six hours of physical education for all women students and such male students as are excused from military science, and one hour of library science for all students except those taking the special curricula and the combined courses in which there are other requirements.

Graduates of this college who have completed the regular course are awarded the degree of Bachelor of Arts, except that, upon request, any student who has met the requirements for that degree may be awarded the degree of Bachelor of Science, provided the major portion of the work has been done in the field of science and the application has the approval of the department in science in which the major work has been carried. Students who have elected the combined program of Arts and Medicine may be granted the degree of Bachelor of Arts or Bachelor of Science after the completion of at least three years of the work of this college and the first year of the School of Medicine. Those electing the combined five-year Academic and Nursing Course may be awarded the degree of Bachelor of Science upon the completion of the full course. Those taking the combined course in Arts and Law may be awarded the Bachelor of Arts degree after the completion of three years of the work of this college and one year of full-time law courses, or its equivalent, in the School of Law.

In all of the combined programs the *last* thirty hours of courses in the Arts and Sciences *must* be completed in residence at College Park. Likewise, the *last* thirty hours of the regular course leading to a degree *must* be taken in College Park.

Normal Load

The normal load for the freshman year is sixteen hours a week for the first semester, including one hour of library science and one hour of military science or physical education, and seventeen hours for the second semester. The sophomore load is seventeen hours per semester, two hours of which are military science or physical education.

The normal load for the junior and senior years is fifteen hours.

Absolute Maximum

Students whose average grade for the *preceding year* is a B or above may, with the approval of the Dean, be permitted to take additional hours for credit; *but in no case shall the absolute maximum of 19 hours per week be exceeded.* In the majority of cases it is better for the student to put in four full years in meeting the requirements for a degree than to try to cover the course in a shorter period by taking additional hours.

Freshman-Sophomore Requirements

(a) Before the beginning of the junior year the student not taking a special curriculum must have completed sixty credit hours in basic subjects and from three to five of these hours *must* be taken from each of six of the eight groups described below under major and minor requirements.

(b) Not more than twenty of these hours may be taken in one department.

(c) Freshmen and sophomores may not carry more than twelve hours in one group at a time.

	Semester	
Freshman Program	*I*	*II*
Composition and Rhetoric (Eng. 1y)	3	3
*Foreign Language	3	5–3
Science (Biological or Physical)	4	4
Reading and Speaking (P. S. 1 y)	1	1
Basic R. O. T. C. (M. I. 1 y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Library Methods (L. S. 1 f)	1	—
Freshman Lectures	—	—
Elect one of the following:		
**Introduction to the Social Sciences (Soc. Sci. 1 y)	3	3
***Mathematics (Math. 1 f and 2 s)		
Modern European History (H. 1 y)		
History of England and Greater Britain (H. 3 y)		
Elements of Literature (Eng. 2 y)		
Total hours	16	17

Sophomore Year

The curriculum of the sophomore year has been arranged on the basis of a wider election of courses than has heretofore prevailed, but the selection of these courses must be strictly within the limits set forth above under Freshman-Sophomore requirements.

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* Three hours throughout year only when entered in second year of language. The remaining two hours in the second semester then become elective.

** Advisable for the advanced courses in Economics, Government, and Sociology.

*** Prerequisite to Physics and necessary for students pursuing advanced courses in Chemistry. Math. 3 f and 4 s may be elected by students having the prerequisites.

Major and Minor Requirements

For the purpose of choosing major and minor fields of study, the courses of instruction open to students in the College are divided into eight groups. During this academic year minors only may be carried in Groups II and VII.

GROUPS

I.	Biological Sciences	Botany Zoology* Bacteriology Entomology
II.	Classical Languages and Literatures	Latin Greek
III.	English Language and Literature	English Comparative Literature Public Speaking
IV.	History and Social Sciences	Economics History Political Science Sociology
V.	Mathematics	Pure Mathematics Applied Mathematics Astronomy
VI.	Modern Languages and Literatures	French German Spanish
VII.	Philosophy, Psychology, and Education	
VIII.	Physical Sciences	Chemistry Geology Physics

(a) A *major* shall consist of not less than 20 and not more than 40 hours in a *university department*, and not less than 30 and not more than 60 in the *group* including the principal department.

(b) A *minor* shall consist of not less than 20 and of not more than 30 credit hours in a *group* related to the *major group*, not more than 25 of which shall be in any one department. Any hours taken in excess of this maximum in the *minor group* will not count as credit hours toward a degree. The *minor* must have the recommendation of the head of the principal department in the *major group*.

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* Students selecting Zoology as the principal department in the major group must take a course of four semester credit hours in General Botany or its equivalent.

(c) At the beginning of the junior year each student (except those following prescribed curricula) must select a major in one of the groups as indicated in (a) and before graduation must complete one major and one minor. In certain exceptional cases two minors may be allowed, but in no case will any hours above the maximum of 30 in either minor be counted for credit toward a degree.

(d) The courses constituting a major must be chosen under the supervision of the faculty of the department in which the major work is done, and ***must*** include a substantial number of courses ***not open*** to freshmen and sophomores.

Specific Requirements for Graduation

Before graduation the following specific requirements must be completed by all students except those pursuing certain prescribed curricula.

A. Military Science or Physical Education, six hours.

B. Library Science, one hour.

C. Group Requirements:

- I. *English*—The required course in Composition and Rhetoric and two hours of Public Speaking. In addition at least a one-semester course must be taken in some form of advanced composition or in literature.
- II. *Foreign Languages and Literatures*—If a student enters the University with but two units of language or less, he must pursue the study of foreign language for two years. If three or more units of foreign language are offered for entrance, he must continue the study of foreign language for one year. Students who offer two units of a foreign language for entrance, but whose preparation is not adequate for the second year of that language, receive only half credit for the first year's course.
- III. *History and the Social Sciences*—At least twelve hours of history, economics, political science, or sociology, which shall include at least a year's course in history other than State history.
- IV. *Mathematics and Natural Sciences*—A minimum requirement of eight hours of laboratory science with a minimum of eleven hours in this group.
- V. *Education, Philosophy, and Psychology*—Six hours, with at least one course in Philosophy or Psychology.

Completion of Specific Requirements

It is strongly recommended that students complete as much of the above specific prescribed work by the end of the sophomore year as can be taken without interfering with the general Freshman-Sophomore Requirements.

All of the specific requirements for graduation must be met before a student may be admitted to full senior standing.

Junior-Senior Requirements

The work in the junior and senior years is elective within the limits set by the Major and Minor Requirements and the completion of the Specific Requirements as outlined above.

Students With Advanced Standing

Students entering the junior year of the College of Arts and Sciences with advanced standing from other universities or from other colleges of this university will be required to meet the requirements respecting studies of the first two years only to the extent of their deficiences in credits in Arts and Science subjects for full junior standing. Scholarship requirements as outlined in Section I of this catalogue will apply to all courses offered for advanced standing.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges of the University.

The number of semester hours accepted from the various colleges is as follows:

College of Agriculture—Fifteen.*
College of Education—Twenty.
College of Engineering—Fifteen.
College of Home Economics—Twenty.
School of Law—Thirty in combined program.
School of Medicine—Thirty in combined program.
School of Nursing—Three years in combined program.

Student Responsibility

The individual student will be held responsible for the selection of the courses and the major in conformity with the preceding regulations. The student will also be held responsible for a knowledge of the general Academic Regulations.

Advisers

Each student may be assigned to a member of the faculty as his personal adviser, who will assist him in the selection of his courses, the arrangement of his schedule, and any other matters on which he may need assistance or advice. The faculty adviser acts in this capacity as assistant to and representative of the Dean, who is charged with the execution of all of the foregoing rules and regulations. The faculty adviser of juniors and seniors is the Head of the principal department of the group which has been selected for a major.

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* Students electing Botany, Bacteriology, or Entomology as the principal department in the major group are not limited to fifteen hours.

SPECIAL CURRICULA

Special curricula are provided in Chemistry and Business Administration, and for the Pre-Medical, Pre-Dental, and Pre-Law courses. They are also provided for the combined programs in Arts and Nursing and Arts and Law.

CHEMISTRY

The Department of Chemistry includes the divisions of Inorganic, Organic, Analytical, Agricultural, Industrial, and Physical Chemistry, together with the State Control Work.

Courses in these several branches of the science are arranged with a view to the following:

(1) Contributing toward the liberal education of the Arts student;

(2) Laying the scientific foundation necessary for the professions of medicine, dentistry, pharmacy, engineering, agriculture, etc.;

(3) Offering training for the pursuit of chemistry as a career.

It should be noted that the chemical curricula hereinafter outlined are designed primarily to insure adequate instruction in the fundamentals of the science. At the same time it has been considered desirable to preserve as high a degree of flexibility as possible in order to afford the student, who has a definite end in view, an opportunity to fit his course to his actual needs. In general it may be said that the curricula offered prepare students to enter the following fields:

1. *Industrial Chemistry*—Curriculum II furnishes basic training, which, in conjunction with subsequent industrial experience or graduate work, should prepare the student to undertake plant control, plant management, or plant development work.

2. *Agricultural Chemistry*—Curriculum III may be adjusted, through the intelligent selection of electives, to fit the student for work in agricultural experiment stations, soil bureaus, geological surveys, food laboratories, industries engaged in the processing or handling of food products, and the fertilizer industries.

3. *General Chemistry*—Curriculum I offers a more liberal selection of subjects in The Sciences and Arts, and, through co-operation with the College of Education, may be supplemented with the work in Education necessary to obtain a State high-school teacher's certificate. To prepare for college teaching, graduate work leading to a higher degree is necessary.

4. *Chemical Research*—Preparation for research in chemistry is also based upon Curricula I, II, and III. It is advisable that elections be made largely from courses in chemistry and the allied sciences. Graduate work is essential (See Graduate School).

5. *State Control Laboratory*—The State Control Laboratory is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. The specific laws involved are the Feed Stuff

Law of Maryland, in effect June 1, 1920; The Fertilizer Law of Maryland, in effect January 1, 1932; and the Lime Inspection Law of Maryland, in effect June 1, 1912.

I. GENERAL CHEMISTRY

Freshman Year	Semester I	II
Composition and Rhetoric (Eng. 1y)	3	3
Modern Language (French or German)	3	3
Algebra and Plane Trigonometry (Math. 1f and 2s)	3	3
General Chemistry (Chem. 1y)	4	4
American History (H 2 y)	3	3
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Freshman Lectures	—	—
	17	17

Sophomore Year	I	II
Qualitative Analysis (Chem. 2f)	5	—
Elementary Organic Chemistry (Chem. 8 s)	—	5
General Physics (Phys. 1y)	4	4
Calculus and Plane Analytic Geometry (Math. 5y)	3	3
Advanced Composition and Rhetoric (Eng. 3f and 4s)	2	2
Reading and Speaking (P. S. 1 y)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
	17	17

Junior Year	I	II
Quantitative Analysis (Chem. 6y)	4	4
Advanced Organic Chemistry (Chem. 116y)	4	4
Principles of Economics (Econ. 3y)	3	3
Electives	4	4
	15	15

Senior Year	I	II
Physical Chemistry (Chem. 102y)	5	5
Electives in Chemistry	4	4
Electives	6	6
	15	15

II. INDUSTRIAL CHEMISTRY

Freshman Year	Semester I	II
Composition and Rhetoric (Eng. 1 y)	3	3
Modern Language (German or French)	3	3
Trigonometry; Advanced Algebra; Analytic Geometry (Math. 3f and 4s)	5	5
General Chemistry (Chem. 1y)	4	4
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Freshman Lectures	—	—
	17	17

Sophomore Year	I	II
Calculus; Elementary Differential Equations (Math. 6y)	5	5
General Physics (Phys. 2y)	5	5
Qualitative Analysis (Chem. 2f)	5	—
Elementary Organic Chemistry (Chem. 8 s)	—	5
Oral Reading (P. S. 11f and 12 s)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
	18	18

Junior Year	I	II
Quantitative Analysis (Chem. 6y)	4	4
Advanced Organic Chemistry (Chem. 116y)	4	4
Theoretical Mechanics (Math. 104s)	—	3
Advanced Composition and Rhetoric (Eng. 3f and 4s)	2	2
Advanced Physics (Phys. 103f)	3	—
Electives	2	2
	15	15

Senior Year	I	II
Physical Chemistry (Chem. 102y)	5	5
Industrial Chemistry (Chem. 110y)	3	3
Principles of Economics (Econ. 3y)	3	3
Electives	4	4
	15	15

III. AGRICULTURAL CHEMISTRY

	Semester	
Freshman Year	*I*	*II*
Composition and Rhetoric (Eng. 1y)	3	3
Algebra and Plane Trigonometry (Math. 1f and 2s)	3	3
General Chemistry (Chem. 1y)	4	4
General Zoology (Zool. 1f)	4	—
General Botany (Bot. 1s)	—	4
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Freshman Lectures	—	—
	16	16

Sophomore Year		
General Physics (Phys. 1y)	4	4
Calculus and Plane Analytic Geometry (Math. 5y)	3	3
Qualitative Analysis (Chem. 2f)	5	—
Elementary Organic Chemistry (Chem. 8s)	—	5
Plant Physiology (Plt. Phys. 1f)	4	—
Electives	—	4
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
	18	18

Junior Year		
Quantitative Analysis (Chem. 6y)	4	4
Advanced Organic Chemistry (Chem. 116y)	4	4
General Bacteriology (Bact. 1f and 2s)	3	3
Advanced Composition and Rhetoric (Eng. 3f and 4s)	2	2
Modern Language (French or German)	3	3
	16	16

Senior Year		
Physical Chemistry (Chem. 102y)	5	5
Organic Analysis (Chem. 115f)	4	—
General Physiological Chemistry (Chem. 108s)	—	4
Principles of Economics (Econ. 3y)	3	3
Electives	3	3
	15	15

BUSINESS ADMINISTRATION

The aim of this curriculum is to afford those who select business as a career a training in the general principles of business. The work is based on the view that through a study of the best business methods there may be obtained valuable mental discipline and at the same time a knowledge of business technique. Business demands men who are broadly trained, and not men narrowly drilled in routine. Hence, two years of liberal college training are very desirable for students intending to enter business. The curriculum provides for this broad cultural background as well as the special training in business subjects.

	Semester	
Freshman Year	*I*	*II*
Composition and Rhetoric (Eng. 1y)	3	3
*Foreign Language (German, French, or Spanish)	3	5-3
Science (Chemistry, Zoology, or Botany)	4	4
Introduction to the Social Sciences (Soc. Sci. 1y)	3	3
Algebra (Math. 1f)	3	—
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Library Methods (L. S. 1 s)	—	1
Freshman Lectures	—	—
	17	17

Sophomore Year		
American History (H. 2y)	3	3
Economic Geography and Industry (Econ. 1 f)	3	—
History of World Commerce (Econ. 2 s)	—	3
Principles of Economics (Econ. 3y)	3	3
Business English (Eng. 17 f and 18 s)	2	2
Elements of Psychology (Psych. 1f)	3	—
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
Plane Trigonometry (Math. 2s)	—	3
	17	17

Junior Year		
Introductory Accounting (Econ. 109y)	3	3
Business Organization and Operation (Econ. 105 f)	2	—
Business Law (Econ. 107 f and 108 s)	3	3
Money and Credit (Econ. 101 f)	2	—
Banking (Econ. 102 s)	—	2

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* Three hours throughout year only when entered in second year of language. The remaining two hours in the second semester then become elective.

	Semester I	Semester II
Mathematical Theory of Investment (Math. 101 f)	3	—
Elements of Statistics (Gen. 114 s or Math. 102 s)	—	3
*Electives	2	4
	—	—
	15	15

Senior Year

	Semester I	Semester II
Corporation Finance (Econ. 103f)	2	—
Investments (Econ. 104s)	—	3
Insurance (Econ. 114s)	—	3
Public Utilities (Econ. 113f)	2	—
Principles of Foreign Trade (Econ. 116s)	—	3
*Electives	11	6
	—	—
	15	15

THE PRE-MEDICAL CURRICULUM

The minimum requirement for admission to the School of Medicine of the University of Maryland is 60 semester hours of prescribed courses, exclusive of military drill or physical education. The subjects and hours prescribed by the Council on Medical Education of the American Medical Association are covered in the first two years of the Pre-Medical Curriculum. In view of the fact, however, that at least five times as many students, most of whom have a baccalaureate degree, apply for admission to the School of Medicine of the University as can be accommodated, students are strongly urged to complete the full three-year curriculum before making application for entrance.

Preference will be given students requesting entrance to the School of Medicine of the University who present the credits obtained by the successful completion of the three-year curriculum or its equivalent of 97 semester hours. To meet the recommendation of the Pre-Medical Committee for preference a student must complete the curriculum with an average grade of B or above, and must also satisfy the Committee that he is qualified by character and scholarship to enter the medical profession. Only in exceptional cases will students who have been less than two years in residence at College Park be recommended for preference in admission to the School of Medicine.

Another advantage the three-year curriculum offers over the minimum requirement of sixty-seven hours is that the students successfully completing this program may, on the recommendation of the Dean of the School of Medicine, be awarded the degree of Bachelor of Arts or Bachelor of Science after the completion of the first year's work in the Medical School. This combined program of seven years leads to the degree of Doctor of Medicine upon the completion of the full course. The first three years are taken in residence at College Park, and the last four in Baltimore in the School of Medicine. At least two years of residence at College Park is necessary for students transferring from other colleges and universities who wish to become candidates for the combined degrees.

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* Electives must be chosen first to fulfill the Specific Requirements for Graduation; then from approved courses in the College of Arts and Sciences, Engineering, Education, or Agriculture. In the senior year at least three hours in each semester must be elected in Economics.

For requirements for admission see Section I, "Entrance."

Freshman Year

	Semester I	Semester II
Composition and Rhetoric (Eng. 1y)	3	3
Algebra and Plane Trigonoemtry (Math. 1f and 2s)	3	3
Elements of Zoology (Zool. 2 f and 3 s)	4	4
General Chemistry (Chem. 1y)	4	4
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Library Methods (L. S. 1 s)	—	1
Freshman Lectures	—	—
	—	—
	16	17

Sophomore Year

	Semester I	Semester II
General Physics (Phys. 1y)	4	4
*Elementary Organic Chemistry (Chem. 8 f or s) *Quantitative Analysis (Chem. 4 f or s)	5	4
Elements of Psychology (Psych. 1 f)	3	—
Comparative Vertebrate Morphology (Zool. 8 s)	—	4
Modern Language (French or German)	3	3
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
	—	—
	17	17

Junior Year

	Semester I	Semester II
Rural Sociology (Soc. 101f)	2	—
Urban Sociology (Soc. 102s)	—	2
Advanced Composition and Rhetoric (Eng. 3 f and 4 s)	2	2
Elementary Physical Chemistry (Chem. 10y)	3	3
General Physiological Chemistry (Chem. 108 s)	—	4
Embryology (Zool. 101f)	4	—
Electives	4	4
	—	—
	15	15

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* Quantitative Analysis may be given in the first semester and Elementary Organic Chemistry in the second semester.

Senior Year

The curriculum of the first year of the School of Medicine. The students also may elect the fourth year's work from advanced courses offered in the College of Arts and Sciences, provided the Specific Requirements for Graduation have been met.

PRE-DENTAL CURRICULUM

Students taking one year of work in the College of Arts and Sciences may be admitted to the second year of the five-year course of the School of Dentistry, provided the following program of studies has been followed:

Freshman Year	*Semester* I	*Semester* II
Composition and Rhetoric (Eng. 1y)	3	3
Elements of Zoology (Zool. 2 f and 3 s)	4	4
Algebra and Plane Trigonometry (Math. 1f and 2s)	3	3
General Chemistry (Chem. 1y)	4	4
Reading and Speaking (P. S. 1y)	1	1
Library Methods (L. S. 1 s)	—	1
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Freshman Lectures	—	—
	16	17

If a second year of pre-dental education be completed in the College of Arts and Sciences, it should include the following courses: General Physics (Phys. 1y) and Elementary Organic Chemistry (Chem. 8 f or s). The remainder of the program will be made up of approved electives.

FIVE-YEAR COMBINED ARTS AND NURSING CURRICULUM

The first two years of this course are taken in the College of Arts and Sciences at College Park. If students enter this combined program with advanced standing, at least the second full year of the course must be completed in College Park.

The remaining three years are taken in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, Baltimore. In addition to the Diploma in Nursing the degree of Bachelor of Science may, upon the recommendation of the Director of the School of Nursing, be granted at the end of the five-year course. Full details regarding this course may be found in the section of the catalogue dealing with the School of Nursing.

Freshman Year	*Semester* I	*Semester* II
Composition and Rhetoric (Eng. 1y)	3	3
*Foreign Language	3	5–3
General Zoology (Zool. 1f)	4	—
General Chemistry (Chem. 1y)	4	4
Elements of Psychology (Psych. 1 s)	—	3
Reading and Speaking (P. S. 1y)	1	1
Physical Education (Phys. Ed. 2y and 4y)	1	1
Freshman Lectures	—	—
	16	17

Sophomore Year	I	II
American History (H. 2y)	3	3
Advanced Composition and Rhetoric (Eng. 3f and 4 s)	2	2
Principles of Sociology (Soc. 1f)	3	—
Fundamentals of Economics (Econ. 5 s)	—	3
Elements of Organic Chemistry (Chem. 12f)	4	—
Elementary Foods (H. E. 31y)	3	3
†Nutrition (H. E. 131s)	—	2–3
Child Nutrition (H. E. 136 s)	—	2–1
Physical Education (Phys. Ed. 6y and 8y)	2	2
	17	17

COMBINED PROGRAM IN ARTS AND LAW

The Law School of the University requires two years of academic credit for admission to the school, or sixty-seven semester hours of college credit.

The University offers a combined program in Arts and Law, leading to the degrees of Bachelor of Arts and Bachelor of Laws. Students pursuing this combined program will spend the first three years in the College of Arts and Sciences at College Park. During this period they will complete the prescribed curriculum in pre-legal studies as outlined below, and must complete the Specific Requirements for Graduation as indicated elsewhere. If students enter the combined program with advanced standing, at least the third full year's work must be completed in residence at College Park. Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of Bachelor of Arts may be awarded on the recommendation of the Dean of the School of Law. The degree of Bachelor of Laws will be awarded upon the completion of the combined program.

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* See footnote, page 95.

† H. E. 131s is the equivalent of 131f, which is repeated the second semester for Pre-Nursing students.

Freshman Year	*Semester* I	II
Composition and Rhetoric (Eng. 1y)	3	3
Science or Mathematics	4–3	4–3
History of England and Greater Britain (H. 3y)	3	3
Introduction to the Social Sciences (Soc. Sci. 1y)	3	3
**Latin or Modern Language	4–3	4–5
Basic R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 1y or 2y and 4y)	1	1
Freshman Lectures	—	—
	16–18	16–18

Sophomore Year		
Expository Writing (Eng. 5 f and 6 s)	2	2
Principles of Economics (Econ. 3y)	3	3
American History (H. 2y)	3	3
Government of the United States (Pol. Sci. 2 f)	3	—
Elements of Psychology (Psych. 1s)	—	3
Reading and Speaking (P. S. 1y)	1	1
Basic R. O. T. C. (M. I. 2y) or Physical Education (Phys. Ed. 3y or 6y and 8y)	2	2
*Electives	3	3
	17	17

Junior Year

Largely electives, including the completion of the Specific Requirements for Graduation as outlined on page 89.

Senior Year

First year of regular law course.

Students who are unable to take the combined program in Arts and Law may fulfill the entrance requirements of the Law School by completing the first two years of pre-legal studies as outlined in the above combined course.

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* Electives should be in English, History, Latin or Modern Languages, Economics or Political Science, or some of the Specific Requirements for Graduation.

** Two hours must be taken in sophomore year if a Science be elected for 4 credits. See also footnote, page 87.

MISCELLANEOUS

LIBRARY SCIENCE

A course in Library Methods is required of students registered in the College of Arts and Sciences.

This course is intended to help students use the library with greater facility. Instruction will be given by practical work with the various catalogues, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much used reference books, which the student will find helpful throughout the college course.

MUSIC

The Department of Music serves students of the University of two general classes: those who make a specialty of the subject with a view to becoming musical artists or music teachers, and those who pursue musical studies for purposes of enjoyment and general culture. For the former group extensive private instruction is provided, with attention to technical development along particular lines; while as large provision as possible is made for all in the various club activities and in public lectures and recitals.

For courses in music see Section III, Courses of Instruction.

Voice

Courses in voice culture, covering a thorough and comprehensive study of tone production, are offered. These are based on the Italian method of singing.

The work required to develop a singer is begun with the most fundamental principles of correct breathing. Scale and arpeggio exercises; all intervals; the portamento, legato, and staccato; the trill; and other embellishments to develop the technique of singing are, through the medium of vocal exercises arranged by the greatest authorities on the voice, studied under the careful supervision of the instructor.

The study of songs and ballads is adapted to the ability and requirements of each singer, a thorough training in diction and phrasing being given through the medium of sacred and secular ballads.

Such work may be followed by a study of the oratorio and the opera.

Opportunities are afforded all voice pupils, who are capable, to make public appearances in the regular pupils' recitals as well as in the churches of the community.

Tuition

One lesson per week, term of eighteen weeks, $24.

The above price for lessons in Voice is offered to students of the University who are pursuing regular academic courses. Terms for private instruction outside the University may be secured from the instructor in Voice.

Piano

Elementary piano courses. Work for beginners, based on the Leschetizky method.

Advanced piano courses. The college work in piano presupposes three years of preparatory study of the piano, part or all of which may be taken at the University.

Lessons are taken twice a week. A four-year college course is as follows:

First Year—Technical studies based on the modern weight and rotary method: Heller Etudes; Sonatas of Haydn, Mozart, and Beethoven; selections from classic and modern composers.

Second Year—Bach Preludes; Concertos by classic masters; Jensen Etudes; selections from classic, romantic, and modern composers.

Third Year—Leschetizky technic; Chopin Preludes and Waltzes; Bach Inventions; Mendelssohn Concertos; Beethoven Sonatas; selections from romantic and modern composers.

Fourth Year—Leschetizky technic; Chopin Etudes; Bach Well-Tempered Clavichord; Sonatas and Concertos by Grieg, McDowell, Schutt, Beethoven, etc.; concert pieces by modern and romantic composers.

Tuition

One lesson per week, term of eighteen weeks, $24.

Note.—Music tuitions are due in advance. Ten per cent. is added to all tuitions not paid in advance.

COLLEGE OF EDUCATION

WILLARD S. SMALL, *Dean.*

The College of Education is organized to meet the needs of the following classes of students: (1) undergraduate students preparing to teach the cultural and the vocational studies in the high schools; (2) advanced students preparing to become high school principals, elementary school principals, educational supervisors, and school administrators; (3) those preparing for educational work in the trades and industries; (4) county agents, home demonstrators, boys and girls club leaders and other extension workers; (5) students majoring in other lines who desire courses in education for their informational and cultural values.

The Summer School, although organically distinct from the College of Education, is administered by the Dean of the College of Education, and is in effect an administrative division of the College.

Departments

The instructional work of the College of Education is conducted by the following functional divisions: History and Principles of Education, Educational Psychology, Methods in Academic and Scientific Subjects, Agricultural Education, Home Economics Education, Industrial Education, and Physical Education.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. See Section I, "Entrance."

For additional requirements for admission to the curricula in Agricultural Education and Home Economics Education, see page 110 and page 111, respectively.

Admission of Normal School Graduates

Graduates of the Maryland normal schools and other accredited normal schools whose scholastic records in the normal school were satisfactory, will be admitted to advanced standing and classified provisionally in the junior class. The exact amount of credit that is allowed for the normal school work depends upon the objectives of the student. The requirements for a degree may be satisfied in most cases by two full college years and one summer session in the University.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are: Bachelor of Arts;

Bachelor of Science. Upon completion of 128 credits in conformity with the requirements specified under "curricula" and in conformity with general requirements of the University, the appropriate degree will be conferred.

Teachers' Special Diploma

The degrees granted for work done in the College of Education indicate primarily the quantity of work completed. The teachers' special diploma certifies to the professional character of such work. Teachers' special diplomas will be granted only to those who attain a grade of C or better in supervised teaching and whose professional interest, personal qualities, and character give promise of success in teaching.

Teachers' special diplomas are granted in the Biological Sciences, Chemistry, English, French, General High School Science, History and Social Sciences, Mathematics and Physics, Vocational Agriculture, Vocational Home Economics, Industrial Education, and Physical Education.

Facilities

In addition to the general facilities offered by the University, certain important supplementary facilities are available.

Supervised Teaching. Actual experience in teaching under competent supervision is of basic importance in the preparation of teachers. Since 1920 a co-operative arrangement with the Prince George's County School authorities has been in effect whereby students preparing to teach get this experience in the Hyattsville High School under instructors employed and paid jointly by the County School Board and the University.

Observation. The observation of teaching necessary for efficient teacher training is conducted in Washington and in nearby Maryland schools. The number, variety, and nearness of these schools provide ample and unusual opportunities for observation of actual classroom situations.

Other Facilities in Washington. The Library of Congress, the Library of the U. S. Office of Education, and the special libraries of other Government offices are easily accessible. The information services of the National Education Association, the American Council on Education, the U. S. Office of Education, the Federal Board for Vocational Education, and of other institutions, public and private, are available to students.

Curricula

The departments of the College of Education fall into two main groups: General Education and Vocational Education. Two types of curricula are offered corresponding with these two major groupings.

General Education. The first of these is designed to prepare teachers of the academic and scientific subjects and the special subjects in high schools. The basic requirements are fixed and definite, but the student may select from a number of subjects the major and minor subjects in which he expects to qualify for teaching. The student may qualify for the degree either of Bachelor of Arts or of Bachelor of Science, depending upon his election of major subject.

The requirements for majors and minors correspond in general with the requirements of the College of Arts and Sciences, but are modified in some respects to adapt them better to the needs of prospective teachers and to satisfy the regulations of the State Department of Education in regard to "the number of college credits required in any two or more subjects which are to be placed on a high school teachers' certificate."

Some of the most common combinations of academic subjects in the high schools of the State are: English and History; English and French; History and French; Mathematics and one or more of the high school Sciences.

Combinations of academic and scientific subjects with Physical Education and Music are very desirable.

Vocational Education. The curricula in Vocational Education are designed for the definite purpose of preparing teachers of agriculture, home economics, and trade and industrial Education. As the University of Maryland is the institution designated by the State Board of Education for the training of teachers of vocational agriculture, home economics, and trades and industries under the provisions of the Smith-Hughes Vocational Educational Act, the curricula in this class have been organized to meet the objectives set up in the act and in the interpretations of the Federal Board of Vocational Education and the State Board of Education. These curricula lead to the degree of Bachelor of Science.

Professional Requirements

The Education courses scheduled in the freshman and sophomore years are orientation courses. The professional courses are given only in the junior and senior years. The minimum requirement for the professional courses is 16 semester hours and includes the following courses: Educational Psychology, Technic of Teaching, Special Methods and Supervised Teaching, and Principles of Secondary Education. *To be eligible to enter the professional courses in the junior year, a student must rank academically in the upper four-fifths of the class at the end of the sophomore year. Continuance in such courses will be contingent upon the student's remaining in the upper four-fifths of his class in subsequent semester revisions of class standing.*

The special requirements of each curriculum are shown in the tabular statements of the curricula for Arts and Science Education, Agricultural Education, and Home Economics Education.

Certification of High School Teachers

The State Department of Education certifies to teach in the approved high schools of the State only such graduates of approved colleges as have satisfactorily fulfilled subject-matter and professional requirements. Specifically it limits certification to such graduates as "rank academically in the upper four-fifths of the class and who make a grade of C or better in practice teaching."

Guidance in Registration

All students wishing to prepare for teaching should consult the Dean of the College of Education regarding possible combinations and the arrangement of their work. At the time of matriculation each student should make a provisional choice of the subjects which he will prepare to teach and secure the advice and approval of the heads of departments which offer these subjects. Definite choice should be made at the beginning of the sophomore year. The advice and approval of the appropriate head of department should be secured.

It is advisable for students who purpose to teach to register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation. It is permissible, however, for a student to register in that college which in conjunction with the College of Education offers the majority of the courses he will pursue in satisfying the requirements of the curriculum he elects.

The teachers' special diploma will be awarded only to the student who shall have fulfilled all of the requirements of the curriculum he elects. Students in other colleges desiring to qualify for the teachers' special diploma should consult with the Dean of the College of Education *at the beginning of the sophomore year* in order to plan satisfactorily their subsequent programs. Adjustments may be made as late as the beginning of the junior year. *It is practically impossible to make adjustments later than that on account of the sequence of professional subjects in the junior and senior years.*

ARTS AND SCIENCE EDUCATION

Students electing this curriculum may register either in the College of Education or the College of Arts and Sciences. In any case they will register with the College of Education for the teachers' special diploma.

The teachers' special diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

General Requirements

In addition to Military Science or Physical Education, required of all students in the University, the following requirements must be fulfilled by all candidates for degrees in this curriculum, preferably by the end of the sophomore year:

(1) Composition and Rhetoric (Eng. 1y), 6 semester hours, and in addition not less than 4 semester hours in English Language or Literature.

(2) Reading and Speaking (P. S. 1y), 2 semester hours.

(3) Two years of foreign language, if the student enters with less than three years of foreign language; one year, if he enters with three years. No foreign language is required of students who enter with four or more years of foreign language.

(4) Nine semester hours of history and the social sciences, of which six must be history.

(5) Eleven hours of natural science or of natural science and mathematics, of which eight semester hours must be in laboratory science and must include General Zoology (Zool. 1 f or s).

	Semester	
Freshman Year	*I*	*II*
Composition and Rhetoric (Eng. 1y)	3	3
College Aims (Guid. 1y)	1	1
Reading and Speaking (P. S. 1y)	1	1
R. O. T. C. (M. I. 1y) or Physical Education (Phys. Ed. 2y and 4y)	1	1
*Foreign Language	3	3–5
Science (Biological or Physical)	4	4
(One from the following groups)	3–4	3–5
History, Mathematics, Science, Foreign Language.		
	—	—
	16–17	16–18
Sophomore Year		
Public Education in the United States (Ed. 2f)	2	—
Educational Hygiene (Ed. 3s)	—	2
Basic R. O. T. C. (M. I. 2y), or Physical Education (Phys. Ed. 6y and 8y)	2	2
†Foreign Language	3	3
Electives	10–11	10–11
	—	—
	17–18	17–18
Junior Year		
Educational Psychology (Ed. 101f)	3	—
Technic of Teaching (Ed. 102s)	—	3
Electives	13	13
	—	—
	16	16
Senior Year		
Special Methods and Supervised Teaching (See Methods in High School Subjects: Section III, pp 202	4	3
Principles of Secondary Education (Ed. 103s)	—	3
Electives	11	9
	—	—
	15	15

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* Except students entering with four or more units of language.

† For students entering with less than three units of language.

Special Requirements

The semester hour requirements detailed below for each of the subjects cover all of the requirements of the State Board of Education (By-law 30 revised) in regard to the number of college credits in any two or more subjects which are to be placed on the high school teacher's certificate.

No student will be permitted to do practice teaching who has not met all previous requirements.

English. For a major in English 36 semester hours are required as follows:

Composition and Rhetoric	6 semester hours
Advanced Composition and Rhetoric	4 semester hours
Reading and Speaking	2 semester hours
Literature	18 semester hours
Electives	6 semester hours
Total	36

For a minor in English 24 semester hours are required:

Composition and Rhetoric	6 semester hours
Advanced Composition and Rhetoric	4 semester hours
Reading and Speaking	2 semester hours
Literature	12 semester hours
Total	24

Students with a major or minor in English must complete English 1y, Public Speaking 1y, Advanced Composition and Rhetoric, and History of English Literature by the end of the junior year.

Additional courses required in the major group are The Drama or Shakespeare and 6 hours from the following: The Novel, English and American Essays, Modern Poets, Victorian Poets, Poetry of Romantic Age, American Literature, and Comparative Literature. (The electives for the minor in English must be from this group.)

History and Social Sciences. For a major in this group 30 semester hours are required as follows:

History	18 semester hours
Economics or Sociology	6 semester hours
Electives	6 semester hours

For a minor, the same requirements less the electives.

Students with a major or minor in History and Social Sciences must complete Modern European History and American History by the end of the junior year.

Modern Languages. French is the only modern language for which supervised teaching is available. For a major in Modern Languages, 30 semester hours are required if the major is confined to one language; if two languages are included in the major, 42 semester hours. If the major includes two languages, at least 24 semester hours must be in French. A minor requires 24 semester hours if confined to one language; 30 semester hours if two languages are included. If both major and minor are taken in modern language, the major requires 30, and the minor, 24 semester hours.

At least 18 hours of a major or minor in modern language must be completed by the end of the junior year if the election is confined to one language; 30 hours if two languages are included.

A major or minor in French must include French 8f, French 9f, and at least one course of the 100 group.

A major or minor in Spanish must include Spanish 6f, Spanish 7f, and at least one course of the 100 group.

A major or minor in German must include German 4f and 5s or German 6f and 7s, and at least one course of the 100 group.

Mathematics. Open to students who enter with solid geometry and algebra beyond quadratics. Twenty semester hours including Math. 3f, Math. 4s, and Math. 7y must be completed by the end of the junior year. Additional courses to make up the remaining 10 semester hours will be chosen from those listed in Section III for advanced undergraduates and graduates. The requirements for a minor are satisfied by the 20 hours listed above; or by 20 hours of the mathematics listed in the Mathematics-Physics major.

Mathematics-Physics. Open to students who enter without solid geometry and algebra beyond quadratics. Thirty-four semester hours are required. Of these, 22 must be completed by the end of the junior year, as follows: Math. 1f; Math. 2s; Math. 8f; Math. 5f; Math. 6s; Phys. 1y. The remaining 12 hours may be elected in the junior and senior years as follows: Phys. 103f; Phys. 104s; and 6 hours from the following group: Math. 101f; Math. 102s; Math. 111f; Astronomy 1s. If state certification in physics is desired and the student did not have physics in the high school, an additional 4 hours of physics must be elected.

Sciences. Both majors and minors are offered in Chemistry, Physics, and the Biological Sciences. The minimum requirement for a major is 30 semester hours; for a minor, 20 semester hours. In case of a major, not less than 20 semester hours must be completed by the end of the junior year.

In satisfaction of the regulation of the State Department of Education for certification in General High School Science, a major and a minor are offered consisting of a combination of Chemistry, Physics, and Biological Sciences. A minor consists of the elementary courses in Chemistry, Physics, and Biology (Zoology and Botany) and enough additional courses to make 12 hours in one of the three subjects. A major consists of a total of 34 semester hours, including the requirements of the minor. If major and minor are taken in (1) General Science and (2) Chemistry, Physics, or Biology, the same credits may be counted towards both, provided that the total number of semester hours in natural science is not less than 52.

AGRICULTURAL EDUCATION

The objectives of the curriculum in Agricultural Education are the teaching of secondary vocational agriculture, the work of county agents, and allied lines of the rural educational service.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

Students with high averages may upon petition be relieved of certain requirements in this curriculum, when evidence is presented showing that either through experience or through previous training the prescription in their case is non-essential; or they may be allowed to carry an additional load.

Students electing this curriculum may register either in the College of Education or in the College of Agriculture. In either case they will register with the College of Education for the teachers' special diploma. The teachers' special diploma will be awarded only to those students who have fulfilled all the requirements of this curriculum.

Freshman Year	*Semester* I	*Semester* II
College Aims (Guid. 1y)	1	1
General Animal Husbandry (A. H. 1 f)	3	—
Principles of Vegetable Culture (Hort. 11 s)	—	3
General Chemistry (Chem. 1-A y or 1-B y)	4	4
General Botany (Bot. 1 f)	4	—
General Zoology (Zool. 1 s)	—	4
Composition and Rhetoric (Eng. 1y)	3	3
Basic R. O. T. C. (M. I. 1y)	1	1
	16	16

Sophomore Year	I	II
Diseases of Plants (Plt. Path. 1f)	3	—
General Entomology (Ent. 1 s)	—	3
Cereal Crop and Forage Crop Production (Agron. 1f and 2s)	3	3
Geology (Geol. 1 f)	3	—
Soils and Fertilizers (Soils 1 s)	—	3
Feeds and Feeding (A. H. 2 f)	3	—
Farm Dairying (D. H. 1 s)	—	3
Elementary Pomology (Hort. 1 f)	3	—
Fundamentals of Economics (Econ. 5 s)	—	3
Basic R. O. T. C. (M. I. 2y)	2	2
	17	17

Junior Year	*Semester* I	*Semester* II
Educational Psychology (Ed. 101 f)	3	—
Observation and the Analysis of Teaching for Agricultural Students (Ag. Ed. 101s)	—	3
Special Advanced Public Speaking (P. S. 13y and 14s)	2	2
Engineering Drafting (Dr. 1y)	1	—
Farm Machinery (F. Mech. 101 f)	3	—
Gas Engines, Tractors, and Automobiles (F. Mech. 102s)	—	3
Poultry (Poultry 101 s)	—	3
Genetics (Gen. 101 f)	3	—
Methods of Crop and Soil Investigations (Agron. 121 s)	—	2
General Floriculture (Hort. 21f)	2	—
General Landscape Gardening (Hort. 31 s)	—	2
Agricultural Economics (A. E. 2f)	3	—
Marketing of Farm Products (A. E. 102 s)	—	3
	17	18

Senior Year	I	II
Course Construction and Project Cost Accounting (Ag. Ed. 102f)	2	—
Teaching Secondary Vocational Agriculture (Ag. Ed. 103f)	3	—
Departmental Organization and Administration (Ag. Ed. 104s)	—	2
Practice Teaching (Ag. Ed. 105s)	—	2
Rural Life and Education (Ag. Ed. 106 s)	—	3
Farm Shop Work (F. Mech. 104f)	1	—
Teaching Farm Shop in Secondary Schools (Ag. Ed. 107 s)	—	1
Farm Practicums and Demonstrations (Ag. Ed. 108y)	1	1
Principles of Secondary Education (Ed. 103 s)	—	3
Farm Management (F. M. 2 f)	4	—
The Novel (Eng. 122f and 123s) or Expository Writing (Eng. 5f and 6s)	2	2
	13	14

HOME ECONOMICS EDUCATION

The Home Economics Education curriculum is for those students who wish to teach vocational home economics, to do home demonstration work, or to engage in other types of home economics in which teaching may be involved.

This is a general course including work in all phases of home economics—foods, clothing, child care—with professional training for teaching these subjects. Electives may be chosen from other colleges.

Opportunity for additional training and practice is given through directed teaching: practice house; and special work and observation of children at the Washington Child Research Center.

The teachers' special diploma will be awarded only to those who have fulfilled all requirements of this curriculum.

Freshman Year	Semester I	Semester II
Composition and Rhetoric (Eng. 1y)	3	3
College Aims (Guid. 1y)	1	1
Clothing Construction (H. E. 12 s)	—	3
Textile Fabrics (H. E. 11 f)	3	—
Principles of Design (H. E. 21f)	3	—
Costume Design (H. E. 24s)	—	3
Reading and Speaking (P. S. 1y)	1	1
Physical Education (Phys. Ed. 2y and 4y)	1	1
Electives	4	4
	16	16

Sophomore Year	I	II
General Chemistry (Chem. 1y)	4	4
Elementary Foods (H. E. 31y)	3	3
Physical Education (Phys. Ed. 6y and 8y)	2	2
Public Education in the United States (Ed. 2f)	2	—
*Special Application of Physics (Phys. 3 s)	—	4
Electives	5	3
	16	16

Junior Year	I	II
Educational Psychology (Ed. 101 f)	3	—
Technic of Teaching (H. E. Ed. 100 s)	—	3
Household Bacteriology (Bact. 3 s)	—	3
Nutrition (H. E. 131 f and 132 s)	3	3
Management of the Home (H. E. 141f and 142s)	3	3
Elements of Organic Chemistry (Chem. 12f)	4	—
Electives	4	5
	17	17

Senior Year	I	II
Child Study (H. E. Ed. 102f)	5	—
Practice in Management of the Home (H. E. 143f)	5	—
Teaching Secondary Vocational Home Economics (H. E. Ed. 103f)	5	—
Interior Decoration (H. E. 121s)	—	3
Principles of Secondary Education (Ed. 103s)	—	3
Education of Women (H. E. Ed. 104s)	—	3
Electives	—	6
	15	15

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* For students who have not had high school Physics.

Electives should include one course in each of the following groups:

General Botany, General Zoology, or Genetics;
History or Social Science;
Public Speaking;
Advanced English.

INDUSTRIAL EDUCATION

Three types of curricula are offered in Industrial Education; viz., a four-year curriculum, a two-year curriculum, and a special curriculum.

Four-Year Curriculum in Industrial Education

This curriculum is designed to prepare both Trade and Industrial teachers and teachers of Industrial Arts. There is sufficient latitude of electives so that a student may also meet certification requirements in some other high school subject.

The entrance requirements are the same as for other curricula offered in the University. Students entering this curriculum will be benefited by engaging in some trade or industry during the summer vacations.

One hundred twenty-eight semester credits are required for the degree of Bachelor of Science in Industrial Education.

Students entering an Industrial Education curriculum must register in the College of Education.

This curriculum, with slight variations according to the needs of the two groups, is so administered as to provide: (a) a four year curriculum in residence at College Park; and (b) a curriculum for teachers in service who have had some college work.

The requirements for the latter class may be met by extension work in Baltimore offered by the Department of Industrial Education and by Summer School attendance. The curriculum requirements for this class of students is distributed approximately as follows:

English	12 credits
History, Sociology, Economics, and Political Science	20 credits
Science and Mathematics	20 credits
Shopwork and Drawing	30 credits
Education	24 credits
Electives	22 credits

The curriculum for students in residence, follows the general pattern of the other residence curriculums in Education. Prospective students should write to the Dean, College of Education, for a special circular of information covering the details of this curriculum.

Two-Year Curriculum in Industrial Education

This curriculum is designed for mature students who have had experience in some trade or industry or in the teaching of shopwork.

Applicants for admission to this curriculum must have as a minimum requirement an elementary school education or its equivalent. The curriculum is prescribed, but it is administered flexibly in order that it may be adjusted to the needs of students.

At the completion of the curriculum a diploma is granted.

Special Courses for Teachers of Trades and Related Subjects

To meet the needs for industrial teacher-training in Baltimore and in other industrial centers, extension courses are offered. The work of these courses deals with the analysis and classification of trade knowledge for instructional purposes, methods of teaching, observation and practice of teaching, organization and management of trade and industrial classes, psychology of trade and industrial education, tests and measurements, history of the development of industrial education, and occupational information, guidance, and placement.

The completion of eight teacher-training courses, which requires, in general, two years or two hundred fifty-six clock hours, will entitle a student to a full three year vocational teacher's certificate in the State of Maryland, and to a special diploma from the College of Education of the University of Maryland.

A special announcement of the extension courses will be issued in September, 1931, and may be obtained from the office of the Registrar either in Baltimore or in College Park.

PHYSICAL EDUCATION

The Physical Education Curriculum is designed primarily to prepare teachers of physical education for the high schools. It is sufficiently specialized to meet that need adequately. At the same time it is flexible enough so that certification requirements in other high school subjects may be met. The variations in the curriculum for men and for women are shown in the schedule.

Upon satisfactory completion of the curriculum the degree of Bachelor of Science will be conferred.

Students electing this curriculum must register in the College of Education.

General Requirements

The general requirements are the same as for Arts and Science Education (see p. 106) except that a foreign language is not required, and 14 semester hours of Biological Science are required as specified in the schedule.

	Semester	
Freshman Year	I	II
Composition and Rhetoric (Eng. 1y)	3	3
College Aims (Guid. 1y)	1	1
Reading and Speaking (P. S. 1y)	1	1
General Zoology (Zool. 1f or s)	4	—
General Bacteriology (Bact. 1f or s)	—	4

	Semester	
	I	II
From the following groups	6	6
History, Science, Foreign Language, Mathematics, Home Economics.		
(Women)		
Personal Hygiene and Physical Activities (Phys. Ed. 2y and 4y)	1	1
Music Appreciation (Mus. 1y)	1	1
(Men)		
R. O. T. C. (M. I. 1y)	1	1
Physical Activities and Personal Hygiene (Phys. Ed. 1y and 11y)	2	2
	17	17
Sophomore Year		
Public Education in U. S. (Ed. 2f)	2	—
Educational Hygiene (Ed. 3s)	—	2
Human Physiology (Zool. 15f)	3	—
Pathogenic Bacteriology (Bact. 2s)	—	4
(Women)		
Personal Hygiene and Physical Activities (Phys. Ed. 6y and 8y)	2	2
Dancing (Phys. Ed. 10y)	2–4	2–4
Games (Phys. Ed. 12f)	3	—
History of Physical Education (14s)	—	3
Electives	3–5	2–4
(Men)		
R. O. T. C. (M. I. 2y)	2	2
Physical Activities (Phys. Ed. 3y)	2	2
Technics of Physical Education (Phys. Ed. 23y)	2	2
Electives	6	5
	17	17
Junior Year		
Educational Psychology (Ed. 101f)	3	—
Technic of Teaching (Ed. 102s)	—	3
Electives	6	6
(Women)		
Physical Education Activities for High School Girls (Ed. 140y)	2	2
Athletics (Phys. Ed. 18f and 18s)	2	2
Natural Gymnastics (Phys. Ed. 20f and s)	2	2
(Men)		
Analysis of Physical Education Activities (Phys. Ed. 25y)	3	3
Coaching High School Athletics (Phys. Ed. 13y)	3	3
	15	15

Senior Year	*Semester* I	II
Principles of Secondary Education (Ed. 103s)	—	3
Physical Education in the High School (Ed. 142y—Women; Ed. 141y—Men)	3	3
(Women)		
Coaching and Officiating, Athletics for Girls (Phys. Ed. 26y)	2	2
Electives	10	7
(Men)		
Special Advanced Speaking (P. S. 15f and 16s)	2	2
Public Health (Bact. 125s)	—	1
Electives	10	6
	15	15

COLLEGE OF ENGINEERING

A. N. JOHNSON, *Dean*

Whether a man follows engineering as his life's work or enters other fields, it is well recognized that the training received in the engineering colleges of today affords a splendid preparation for many callings in public and private life outside the engineering profession.

The College of Engineering includes the Departments of Civil, Electrical, and Mechanical Engineering. A few years ago the curricula were considerably changed, the general purpose being to broaden the courses of instruction, that young men may be better prepared to enter industry or the public service. In either field there is abundant opportunity; each demands the civil, the electrical, and the mechanical engineer. Maryland needs men to carry on her great highway work and large public undertakings, as well as to carry on her industries. Such training, therefore, seems preeminently a function of the State's University.

The subject matter of the courses is not essentially different from that usually given. In order to give the time necessary to the technical subjects, as well as to those of a more general character, courses of study are prescribed so that the time in each semester may be used to the best advantage.

The studies prescribed for freshmen and sophomores are practically the same for all branches of engineering. Among the advantages that such a plan has is the very important one that the young man will not be called upon to decide definitely the branch of engineering in which he will specialize until his junior year.

Engineering research is recognized today as one of the most needed useful contributions that the engineering college can make to the State. Work of this character is under way at the University of Maryland, where, through co-operation with the Maryland State Roads Commission and the U. S. Bureau of Public Roads, highway research problems are being studied, the solution of which will prove of utmost value to the people of the State. It is planned to develop as rapidly as possible this phase of the work, which will have, aside from its great economic value to the State, an important educational value because of the close contact the students will have with the live engineering problems of today.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere described for admission to the undergraduate departments of the University, except as to the requirements in mathematics. See Section I, "Entrance."

It is possible, however, for high school graduates having the requisite number of entrance units to enter the Engineering College without the unit for advanced algebra, or the one-half unit for solid geometry, provided such students are prepared to devote their first summer to a course in analytic geometry. The program for such students would be as follows: During the first semester five hours a week would be devoted to making up advanced algebra and solid geometry; in the second semester mathematics of the first semester would be taken, and the second semester mathematics would be taken in the summer school. Thus, such students, if they passed the course, would be enabled to enter the sophomore year the next fall.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in Civil, Electrical, and Mechanical Engineering, respectively.

Master of Science in Engineering

The degree of Master of Science in Engineering is given to those students registered in the Graduate School, who hold bachelor degrees in engineering, prerequisite for which requires a similar amount of preparation and work as required for bachelor degrees in the Engineering College of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School, as will be found explained in the catalogue under the head of Graduate School.

Professional Degrees in Engineering

The degrees of Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than three years.

2. His registration for a degree must be approved at least twelve months prior to the date at which the degree is sought. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

3. He shall present a satisfactory thesis on an approved subject.

4. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Civil, Electrical, and Mechanical Engineering.

Equipment

The Engineering building is provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for all phases of engineering work.

A substantial addition to the Engineering Building has been completed, which will be used primarily for the Electrical Engineering Department. The laboratories formerly occupied by the Electrical Engineering Department have thus become available as additional space for the Civil and Mechanical Engineering Departments.

A feature of the additional space provided is a lecture room for general use, which will seat about two hundred and fifty, and make available for those courses in which the enrollment has greatly increased in the past few years a lecture room of greater seating capacity than the ordinary classroom provides.

Drafting-Rooms. The drafting-rooms are equipped for practical work. Engineering students must provide themselves with an approved drawing outfit, material, and books, the cost of which during the freshman year amounts to about $25.00.

Electrical Engineering Laboratory. The equipment includes many of the various types of direct current and alternating current generators and motors, rotary converter, distribution transformers, control apparatus, and the measuring instruments essential to practical electrical testing. For experimental work, electrical power is obtained from engine driven units and a turbine generator; a storage battery is used for constant voltage-testing purposes.

Instruments are available for measuring the candle power of lamps and for the determination of illumination intensities. The standardizing laboratory apparatus includes primary and secondary standards used in calibrating laboratory instruments.

The telephone laboratory is equipped with apparatus for experimental work on magneto and common battery system. The radio apparatus is limited, at present, to receiving sets.

Mechanical Engineering Laboratory. The apparatus consists of plain slide valve engines, steam turbine set, fans, pumps, indicators, gauges, feed water heaters, tachometers, injectors, flow meters, apparatus for determination of the B. T. U. in coal, gas, and liquid fuels, pyrometers, draft gauges, planimeters, thermometers, and other necessary apparatus and equipment for a mechanical laboratory.

Materials Laboratory. Apparatus and equipment are provided for making standard tests on various construction materials as steel, concrete, timber, and brick.

Equipment includes two 100,000-pound universal testing machines, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also made available for student work.

Highway Research Laboratory. Certain problems in highway research have been undertaken and are actively under way, being carried on in cooperation with the State Roads Commission and the U. S. Bureau of Public Roads.

A study of the traffic over the Maryland State Highway system has been in progress, and traffic maps have been prepared, which cover the entire state highway system.

The elastic properties of concrete have been studied in the laboratory; this work being co-ordinated with the general program of research problems undertaken by the U. S. Bureau of Public Roads.

In co-operation with the State Roads Commission, there are taken every year samples of concrete from the concrete roads of the State, these samples consisting of cores cut from the road by a special core drill apparatus mounted upon a suitably equipped truck. The cores are brought into the laboratory, where they are tested and records of the results sent to the State Roads Commission.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided for engineering students.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, and drill presses.

The foundry is provided with an iron cupola, a brass furnace, and coke oven.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane, topographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of types of instruments is provided, including domestic as well as foreign makes.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available for students in this branch of engineering.

There has also been collected a wide variety of specimens of the more common minerals and rocks from various sections of the country, particularly from Maryland.

Library

Each department contains a well-selected library for reference, and the standard engineering magazines.

The class work, particularly in the higher courses, requires that the students consult special books of reference and current technical literature.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are also expected to attend and take part in the meetings of the Engineering Society, Seminar, and engineering lectures.

Junior and senior students with requisite standing may elect additional hours not to exceed three a semester.

All members of the freshman engineering class are required to attend a series of lectures, the speakers, for the most part, being other than engineers. Each student is required to hand in a very brief written summary of each lecture.

All engineering students are urged to get work during the summer, particularly in some engineering field, if possible.

On the return of the students in the fall, each is given a blank on which to state the character of the work upon which he has been engaged for the past summer, the name of the employer, and the amount of money he earned. Such records are very helpful when the students wish to secure employment upon graduation.

The proximity of the University to Baltimore and Washington, and to other places where there are great industrial enterprises, offers an excellent opportunity for the engineering student to observe what is being done in his chosen field. An instructor accompanies students on all trips of inspection.

Practically the same program is required of all students in engineering in the freshman and sophomore years.

	Semester	
	I	*II*
Freshman Year		
Composition and Rhetoric (Eng. 1 y)	3	3
*Elementary Social Sciences (Soc. Sci. 1 y)	3	3
*Modern Language	3	3
Reading and Speaking (P. S. 1 y)	1	1
Trigonometry, Advanced Algebra; Analytic Geometry (Math. 3 f and 4 s)	5	5
General Chemistry (Chem. 1 y)	4	4
Engineering Drafting (Dr. 1 y)	1	1
Shop and Forge Practice (Shop. 1 y)	1	1
Basic R. O. T. C. (M. I. 1 y)	1	1
Engineering Lectures	—	—
	19	19
Sophomore Year		
Oral Technical English (P. S. 4 y)	1	1
*Modern Language (Adv. Course)	3	3
*Modern European History (H. 1 y)	3	3
Calculus; Elementary Differential Equations (Math. 6 y)	5	5
General Physics (Phys. 2 y)	5	5
Descriptive Geometry (Dr. 2 y)	2	2
Machine Shop Practice (Shop 2 f and 3 s) M. and E.	1	2
Basic R. O. T. C. (M. I. 2 y)	2	2
Surveying and Plane Surveying (Surv. 1f) M. and E.	1	—
Civil (Surv. 2 y)	2	2
Engineering Lectures	—	—
	20	20

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* Alternatives.

CIVIL ENGINEERING

Junior Year	*Semes*	
	I	
*Fundamentals of Economics (Econ. 5 f)	3	
*Advanced Oral Technical English (P. S. 5 y)	1	
*Engineering Geology (Engr. 3 y)	1	
*Engineering Mechanics (Mech. 2 y)	5	
Prime Movers (Engr. 1 y)	2	
Elements, Design of Structures (C. E. 102 s)	—	
*Materials of Engineering (Mech. 3 s)	—	
Advanced Surveying (Surv. 101 f)	3	
Elements of Railroads (C. E. 101 f)	3	—
*Land Transportation (Econ. 112 s)	—	—
Engineering Lectures	—	
	—	—
	18	1

Senior Year		
*Advanced Oral Technical English (P. S. 6 y)	1	1
*Engineering Jurisprudence (Engr. 102 s)	—	1
*Engineering Economy (Engr. 101 s)	—	1
*Engineering Chemistry (Chem. 111 f)	2	—
Sanitary Bacteriology (Bact. 4 s)	—	1
Highways (C. E. 106 f)	4	—
Bridges, Masonry and Steel (C. E. 105 y)	4	4
Buildings, Masonry and Steel (C. E. 104 y)	4	4
Sanitation (C. E. 107 y)	3	3
Thesis (C. E. 108 s)	—	3
Engineering Lectures	—	—
	—	—
	18	18

ELECTRICAL ENGINEERING

Junior Year		
*Fundamentals of Economics (Econ. 5 s)	—	3
Differential Equations (Math. 103 f)	3	—
*Advanced Oral Technical English (P. S. 5 y)	1	1
*Engineering Geology (Engr. 3 y)	1	1
*Engineering Mechanics (Mech. 1 y)	4	3
*Materials of Engineering (Mech. 3 s)	—	2
Elements of Machine Design (M. E. 101 f)	1	—
Direct Currents (E. E. 102 y)	5	5
*Prime Movers (Engr. 2 y)	2	2
Electrical Machine Design (E. E. 103 y)	1	1
Engineering Lectures	—	—
	—	—
	18	18

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* Required of all Engineering students.

	Semester	
Senior Year	*I*	*II*
Advanced Oral Technical English (P. S. 6 y)	1	1
Engineering Jurisprudence (Engr. 102 s)	—	1
Engineering Economy (Engr. 101 s)	—	1
Engineering Chemistry (Chem. 111 f)	2	—
Alternating Currents (E. E. 104 y)	5	5
Electrical Machine Design (E. E. 105 y)	1	2
Electric Railways and Electric Power Transmission (E. E. 106 y)	3	4
Telephones and Telegraphs (E. E. 107 y)	3	4
Radio Telephony and Telegraphy (E. E. 108 y)	3	4
Illumination (E. E. 109 y)	3	4
Thermodynamics (Mech. 101 f)	3	—
Engineering Lectures	—	—
	—	—
	18	18

MECHANICAL ENGINEERING

Junior Year		
*Fundamentals of Economics (Econ. 5 s)	—	3
Differential Equations (Math. 103 f)	3	—
*Advanced Oral Technical English (P. S. 5 y)	1	1
*Engineering Geology (Engr. 3 y)	1	1
*Engineering Mechanics (Mech. 1 y)	4	3
*Materials of Engineering (Mech. 3 s)	—	2
Foundry Practice (Shop 4 f)	1	—
Heat Power Engineering (M. E. 104 s)	—	2
Kinematics and Machine Design (M. E. 102 y)	4	4
Elements of Steel Design (C. E. 103 s)	—	2
Pressure Vessels (M. E. 103 f)	1	—
Engineering Chemistry (Chem. 113 f)	3	—
Engineering Lectures	—	—
	—	—
	18	18

Senior Year		
*Advanced Oral Technical English (P. S. 6 y)	1	1
*Engineering Jurisprudence (Engr. 102 s)	—	1
*Engineering Economy (Engr. 101 s)	—	1
Design of Prime Movers (M. E. 107 y)	3	3
Design of Power Plants (M. E. 108 s)	—	3
Design of Pumping Machinery (M. E. 106 f)	2	—
Heating and Ventilation (M. E. 105 f)	2	—

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* Required of all Engineering students.
† Select two.

	Semester I	Semester II
Thermodynamics (Mech. 102 y)	3	3
Elementary Physical Chemistry (Chem. 10 y)	3	3
Engineering Finance (M. E. 110 s)	—	2
Mechanical Laboratory (M. E. 109 y)	1	1
Industrial Application of Electricity (E. E. 101 f)	3	—
Engineering Lectures	—	—
	18	18

COLLEGE OF HOME ECONOMICS

M. Marie Mount, *Dean*

Home economic subjects are planned to meet the needs of the following classes of students: (1) those who desire a general knowledge of the facts and principles of home economics without specializing in any one phase of home economics; (2) those students who wish to teach Home Economics or to become Extension Specialists in Home Economics; (3) those who are interested in certain phases of home economics with the intention of becoming dietitians, restaurant and cafeteria managers, textile specialists, designers, buyers of clothing in department stores, or demonstrators for commercial firms.

Departments

For administrative purposes the College of Home Economics is organized into the Departments of Foods and Nutrition; Textiles, Clothing, and Art; and Home and Institutional Management.

Facilities

The Home Economics Building is adequately equipped with class rooms and laboratories. In addition the college also maintains a home management house, in which students gain practical experience in home making during their senior year.

Baltimore and Washington afford unusual opportunities for trips, additional study, and practical experience pertaining to the various phases of Home Economics.

Degree

The degree of Bachelor of Science is conferred for the satisfactory completion of four years of prescribed courses, of 128 semester hours. In accordance with the University policy, not less than three-fourths of the credits for graduation must be earned with grades of A, B, or C.

Prescribed Curricula

All students registered in the College of Home Economics follow the General Home Economics Curriculum for the first two years. At the beginning of the junior year a student may continue with the General Home Economics Curriculum, or elect one of the following special curricula, or a combination of curricula. A student who wishes to teach Home Economics may register in Home Economics Education in the College of Home Economics, or in the College of Education (see Home Economics Education).

Following are the outlines of the Curricula for General Home Economics, Textiles and Clothing, Foods and Nutrition, and Institutional Management:

GENERAL HOME ECONOMICS

Freshman Year	Semester I	Semester II
Composition and Rhetoric (Eng. 1 y)	3	3
Textile Fabrics (H. E. 11 f)	3	—
Clothing Construction (H. E. 12 s)	—	3
Principles of Design (H. E. 21f)	3	—
Costume Design (H. E. 24 s)	—	3
Reading and Speaking (P. S. 1 y)	1	1
Physical Education (Phys. Ed. 2 y and 4 y)	1	1
*Language or Electives	4	4
Home Economics Lectures	—	—
	15	15

Sophomore Year	I	II
General Chemistry (Chem. 1y)	4	4
Elementary Foods (H. E. 31 y)	3	3
Special Applications of Physics (Phys. 3 s)	—	4
Physical Education (Phys. Ed. 6 y and 8 y)	2	2
**Electives	8	4
	17	17

Junior Year	I	II
Elements of Organic Chemistry (Chem. 12f)	4	—
Household Bacteriology (Bact. 3 s)	—	3
Nutrition (H. E. 131 f and 132 s)	3	3
Management of the Home (H. E. 141f and 142 s)	3	3
Advanced Clothing (H. E. 111 f)	4	—
**Electives	3	8
	17	17

Senior Year	I	II
Child Study (H. E. Ed. 102 f)	5	—
Practice in Management of the Home (H. E. 143f)	5	—
Choice of one unit in Foods, Clothing, Textiles, or an additional unit in Child Study	5	—
Interior Decoration (H. E. 121 s)	—	3
**Electives	—	12
	15	15

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*This requirement may be waived for students entering with three or more years of a language.

**In addition to the curriculum as prescribed, one course in each of the groups indicated below, is required:

Economics; psychology; sociology; and one of the following sciences: zoology, botany, or genetics.

TEXTILES AND CLOTHING CURRICULUM

Junior Year	Semester I	Semester II
Elements of Organic Chemistry (Chem. 12f)	4	—
Household Bacteriology (Bact. 3 s)	—	3
Nutrition (H. E. 131 f)	3	—
Advanced Clothing (H. E. 111 f)	4	—
Chemistry of Textiles (Chem. 14 s)	—	4
Management of the Home (H. E. 141f and 142 s)	3	3
Electives	3	7
	17	17

Senior Year	I	II
Practice in Management of the Home (H. E. 143f)	5	—
Child Study (H. E. Ed. 102 f)	5	—
Problems and Practice in Textiles and Clothing (H. E. 113f)	5	—
Interior Decoration (H. E. 121 s)	—	3
Special Clothing Problems (H. E. 112 s)	—	3
Advanced Design (H. E. 123 s)	—	3
Electives	—	6
	15	15

FOODS CURRICULUM

Junior Year	I	II
Elements of Organic Chemistry (Chem. 12f)	4	—
General Physiological Chemistry (Chem. 108 s)	—	4
Nutrition (H. E. 131 f and 132 s)	3	3
Management of the Home (H. E. 141f and 142 s)	3	3
Demonstrations (H. E. 133 f)	2	—
Household Bacteriology (Bact. 3 s)	—	3
Electives	5	4
	17	17

Senior Year	I	II
Child Study (H. E. Ed. 102 f)	5	—
Practice in Management of the Home (H. E. 143f)	5	—
Problems and Practice in Foods (H. E. 135f)	5	—
Interior Decoration (H. E. 121 s)	—	3
Advanced Foods (H. E. 134 s)	—	3
Electives	—	9
	15	15

Note: Upon the advice of the instructor in charge, the Clothing and Textile curriculum may be modified to allow for the election of certain art courses for interested students.

INSTITUTIONAL MANAGEMENT CURRICULUM

Junior Year	Semester I	Semester II
Elements of Organic Chemistry (Chem. 12 f)	4	—
Household Bacteriology (Bact. 3 s)	—	3
Nutrition (H. E. 131 f and 132 s)	3	3
Management of the Home (H. E. 141 f and 142 s)	3	3
Institutional Management (H. E. 144 y)	3	3
Electives	4	5
	17	17

Senior Year	Semester I	Semester II
Practice in Management of the Home (H. E. 143 f)	5	—
Child Study (H. E. Ed. 102 f)	5	—
Practice in Institutional Management (H. E. 145 f)	5	—
or		
Problems and Practice in Foods (H. E. 135 f)	5	—
Advanced Institutional Management (H. E. 146 s)	—	3
Interior Decoration (H. E. 121 s)	—	3
Electives	—	9
	15	15

THE GRADUATE SCHOOL

C. O. Appleman, *Dean.*

HISTORY AND ORGANIZATION

In the earlier years of the institution the Master's degree was frequently conferred, but the work of graduate students was in charge of the departments concerned, under the supervision of the General Faculty. The Graduate School of the University of Maryland was established in 1918, and organized graduate instruction leading to both the Master's degree and the Doctor's degree was undertaken. The faculty of the Graduate School includes all members of the various faculties who give instruction in approved graduate courses. The general administrative functions of the Graduate Faculty are delegated to a Graduate Council, of which the Dean of the Graduate School is chairman.

GENERAL REGULATIONS

ADMISSION

Graduates of colleges and universities of good standing are admitted to the Graduate School. Before entering upon graduate work all applicants must present evidence that they are qualified by their previous work to pursue with profit the graduate courses desired. Application blanks for admission to the Graduate School are obtained from the office of the Dean. After approval of the application, a matriculation card, signed by the Dean, is issued to the student. This card permits the student to register in the Graduate School. After payment of the fee, the matriculation card is stamped and returned to the student. It is the student's certificate of membership in the Graduate School, and may be called for at any succeeding registration.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

REGISTRATION

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register at the beginning of each semester in the office of the Dean of the Graduate School, Room T-214, Agricultural Building. Students taking graduate work in the Summer School are also required to register in the Graduate School at the beginning of each session. In no case will graduate credit be given unless the student matriculates and registers in the Graduate School. The program of work for the semester or the summer session is entered upon two course cards, which are signed first by the professor in charge of the student's major subject and then by the Dean of the Graduate School. One card is retained in the Dean's office. The student takes the other card, and, in case of a new student, also the matriculation card, to the Registrar's office, where a charge slip for the fee is issued. The charge slip, together with the course card, is presented at the Cashier's office for adjustment of fees. After certification by the Cashier that fees have been paid, class cards are issued by the Registrar. Students will not be admitted to graduate courses without class cards. Course cards may be obtained at the Registrar's office or at the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

GRADUATE COURSES

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only those courses designated *For Graduates* or *For Advanced Undergraduates* and *Graduates*. Graduate students may elect courses numbered from 1 to 99 in the general catalogue, but graduate credit will not be allowed for these courses. Students with inadequate preparation may be obliged to take some of these courses as prerequisites for advanced courses.

PROGRAM OF WORK

The professor who is selected to direct a student's thesis work is the student's adviser in the formulation of a graduate program including suitable minor work. This program receives the approval of the Dean by his endorsement of the student's course card.

To encourage thoroughness in scholarship through intensive application, graduate students in the regular sessions taking courses carrying full graduate credit are limited to a program of thirty credit hours for the year. Students holding half-time graduate assistantships are usually limited to sixteen credit hours for the year. Four or six additional credits may be allowed if six or more of the total constitute seminar and research work.

Residence credit for all research work relating directly to the Master's or the Doctor's thesis should be stated as credit hours on the registration card for the semester in which the work is to be done. If a student is doing only research work under the direction of an official of the institution he must register and pay for a minimum of four credit hours per semester. The number of credit hours reported at the end of the semester will depend upon the work accomplished, but it will not exceed the number for which the student is registered.

SUMMER GRADUATE WORK

Graduate work in the Summer Session may be counted as residence towards an advanced degree. Four summer sessions and six credits on thesis work done *in absentia* under direction may be accepted as satisfying the residence requirement for the Master's degree. By carrying approximately six semester hours of graduate work for four sessions and upon submitting a satisfactory thesis, a student may be granted the degree of Master of Arts or Master of Science. In some instances a fifth summer may be required in order that a satisfactory thesis may be completed.

Graduate students who combine the summer and winter plans for the Master's degree are required to spend at least three full summers and one semester in residence.

Students may transfer no more than six semester hours from another institution; such transfer does not shorten the required residence.

Graduate work may be pursued during the entire summer in some departments, by special arrangement. Such students as graduate assistants, or others who may wish to supplement work done during the regular year, may satisfy one-third of an academic year's residence by full-time graduate work for 11 or 12 weeks, provided satisfactory supervision and facilities for summer work are available in their special fields.

The University publishes a special bulletin giving full information concerning the Summer School and the graduate courses offered during the Summer Session. This bulletin is available upon application to the Registrar of the University.

GRADUATE WORK BY SENIORS IN THIS UNIVERSITY

Seniors who have completed all their undergraduate courses in this University by the end of the first semester, and who continue their residence in the University for the remainder of the year, are permitted to register in the Graduate School and secure the privileges of its membership, even though the bachelor's degree is not conferred until the close of the year.

Seniors of this University who have nearly completed the requirements for the undergraduate degree may, with the approval of their undergraduate Dean and the Dean of the Graduate School, register in the undergraduate college for graduate courses, which will be transferred for graduate credit toward a degree at this University, but the total of undergraduate and graduate courses must not exceed 15 credits for the semester.

ADMISSION TO CANDIDACY FOR ADVANCED DEGREES

Application for admission to candidacy for either the Master's or the Doctor's degree is made on application blanks, which are obtained at the office of the Dean of the Graduate School. These are filled out in duplicate and after the required endorsements are obtained, the applications are acted upon by the Graduate Council. An official transcript of the candidate's undergraduate record and any graduate courses completed at other institutions must accompany the application unless these are already on file in the Dean's office.

A student making application for admission to candidacy for the degree of Doctor of Philosophy must also obtain from the head of the Modern Language Department a statement that he possesses a reading knowledge of French and German. Regular examinations are held in the office of the Modern Language Department on the first Wednesdays of February, June, and October.

Admission to candidacy in no case assures the student of a degree, but merely signifies that the candidate has met all the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as are demanded by the requirements of the degree sought. The candidate's record in graduate work already completed must show superior scholarship. A preliminary examination or such other substantial tests as the departments elect may also be required for admission to candidacy for the degree of Doctor of Philosophy.

The time to make application for admission to candidacy is stated under the heading of requirements for the degree sought.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Advancement to Candidacy. Each candidate for the Master's degree is required to make application for admission to candidacy not later than the date when instruction begins for the second semester of the academic year in which the degree is sought, but not until at least the equivalent of one semester of graduate work has been completed.

Residence Requirements. The standard residence requirement is one academic year, but this does not mean that the work prescribed for each individual student can always be completed in one academic year. Inadequate preparation for the graduate courses the student wishes to pursue may make a longer period necessary.

Credits and Scholarship Requirements. The minimum credit requirement is 30 semester hours in courses approved for graduate credit. From 18 to 20 credits must be earned in the major subject; and at least one-half of the total major credits, including thesis, must be taken in courses for graduates only. The number of major credits allowed for thesis ranges from 6 to 10, depending upon the amount of work done and upon the major course requirements. From 10 to 12 credits must lie outside the major subject and form a coherent group of courses intended to supplement and support the major work. The maximum total credit for the one hour per week seminar courses is limited to four semester hours in the major subject and to two semester hours in the minor subjects. No credits are acceptable for an advanced degree that are reported with a grade lower than "C".

At least 20 of the 30 semester credits required for the Master's degree must be taken at this institution. In certain cases graduate work done in other graduate schools of sufficiently high standing may be substituted for the remaining required credits, but the final examination will cover all graduate work offered in fulfillment of the requirements for the degree. The Graduate Council, upon recommendation of the head of the major department, passes upon all graduate work accepted from other institutions.

Work in accredited research laboratories of the United States Department of Agriculture and other local national research agencies may be accepted, when previously arranged, as residence work in fulfillment of the thesis requirement for a degree. These laboratories are located within easy reach of the University.

Thesis. The thesis required for the Master's degree should be typewritten on a good quality of paper 11 x 8½ inches in size. The original copy must

be deposited in the office of the Graduate School not later than two weeks before commencement. One or two additional copies should be provided for use of members of the examining committee prior to the final examination.

Final Examination. The final oral examination is conducted by a committee appointed by the Dean of the Graduate School. The student's adviser acts as the chairman of the committee. The other members of the committee are persons under whom the student has taken most of his major and minor courses.

The period for the oral examination is approximately one hour.

The examining committee also approves the thesis, and it is the candidate's obligation to see that each member of the committee has ample opportunity to examine a copy of the thesis prior to the date of the examination.

A student will not be admitted to final examination until all other requirements for the degree have been met.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Advancement to Candidacy. Candidates for the Doctor's degree must be admitted to candidacy not later than one academic year prior to the granting of the degree. Applications for admission to candidacy for the Doctor's degree must be deposited in the office of the Dean not later than October 1 of the academic year in which the degree is sought.

Residence. Three years of full-time resident graduate study beyond the Bachelor's degree or two years beyond the Master's degree are required. The first two of the three years may be spent in other institutions offering standard graduate work. On a part-time basis the time needed will be correspondingly increased. The degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship and ability to carry on independent research in the special field in which the major work is done.

Major and Minor Subjects. The candidate must select a major and one or two closely related minor subjects. Thirty semester hours of minor work are required. The remainder of the required residence is devoted to intensive study and research in the major field. The amount of required course work in the major will vary with the subject and the individual candidate.

Thesis. The ability to do independent research must be shown by a dissertation on some topic connected with the major subject. The original typewritten copy of the thesis must be deposited in the office of the Dean at least three weeks before the time the degree is granted. One or two extra copies should be provided for use of members of the examining committee prior to the date of the final examination. The theses are later printed in such form as the committee and the Dean may approve and fifty copies are deposited in the library.

Final Examination. The final oral examination is held before a committee appointed by the Dean. One member of this committee is a representative of the Graduate Faculty who is not directly concerned with the student's graduate work. One or more members of the committee may be persons from other institutions, who are distinguished scholars in the student's major field.

The duration of the examination is approximately three hours and covers the research work of the candidate as embodied in his thesis, and his attainments in the fields of his major and minor subjects.

GRADUATE FEES

The fees paid by graduate students are as follows:

A matriculation fee of $10.00. This is paid once only, upon admission to the Graduate School.

A fixed charge, each semester, at the rate of $1.50 per semester credit hour, with a minimum charge of $6.00.

A diploma fee (Master's degree), $10.00.

Graduation fee, including hood (Doctor's degree), $20.00.

FELLOWSHIPS AND GRADUATE ASSISTANTSHIPS

A number of fellowships and graduate assistantships have been established by the University. A few industrial fellowships are also available in certain departments.

Applications for Fellowships and Graduate Assistantships. Application blanks may be obtained at the office of the Dean of the Graduate School. All applications with the necessary credentials are sent by the applicant direct to the Dean not later than May 15. His endorsement assures the applicant of admission to the Graduate School in case he is awarded either a fellowship or a graduate assistantship. After the applications have been approved by the Dean they are sent to the heads of the departments concerned, who make the selection and recommend to the proper administrative officer that the successful applicants be appointed. All the applications together with the credentials are then returned to the office of the Dean of the Graduate School. Those of the successful applicants, properly endorsed, are placed on file for record. The credentials will be returned to the unsuccessful applicants.

Stipend. The University fellowships pay $500 and the appointment is for the academic year. In certain cases the term of appointment may be extended to include one or two summer months in addition to the nine months of the academic year.

The stipend for the industrial fellowships varies according to the type of fellowship.

The stipend attached to the graduate assistantships is $1,000 per annum and the appointments are made for twelve months, with one month's vacation. Graduate students holding appointments as fellows or graduate assistants are exempt from all fees except graduation fees.

Service Requirements. Each University fellow is expected to give a limited portion of his time to instruction or performing equivalent duties prescribed by the major department. The usual maximum amount of service required is five hours per week of class-room work or twelve hours of laboratory and other prescribed duties. No service is required of the industrial fellow other than research. The teaching graduate assistants devote one-half of their time to instruction. This is equivalent to about one-half of the load of a full-time instructor. Several research assistantships are offered by the Experiment Station and the only service required is in connection with research projects.

Residence Requirements for a Degree. Fellows may satisfy the residence requirements for either the Master's or Doctor's degree without extension of the usual time.

Graduate Assistants are required to spend two years in residence for the Master's degree, but for the Doctor's degree they are allowed two-thirds residence credit for each academic year at this University. The minimum residence requirement beyond the Bachelor's degree, therefore, may be satisfied in four academic years and one summer, or three academic years and three summers of 11 to 12 weeks.

GRADUATE SCHOOL ANNOUNCEMENTS FOR 1932-1933

The University publishes a special bulletin giving more detailed information concerning graduate work. This publication containing the Graduate School announcements for the year 1932-1933 is available upon application to the Registrar of the University.

SUMMER SCHOOL

WILLARD S. SMALL, *Director.*

A summer session of six weeks is conducted at College Park. The program is designed to serve the needs of four classes of students: (1) teachers and supervisors of the several classes of school work—elementary, secondary, and vocational; (2) students who are candidates for degrees in agriculture, arts and sciences, education, engineering, and home economics; (3) graduate students; (4) special students, as farmers, breeders, dairymen, home makers, chemists, public speakers.

Terms of Admission

Formal examinations for admission are not required.

Teachers and special students not seeking a degree are admitted to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer School.

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree.

Credits and Certificates

The semester hour is the unit of credit as in other sessions of the University. During the summer session, a lecture course meeting five times a week for six weeks and requiring the standard amount of outside work, is given a weight of two semester hours.

Appropriate educational courses satisfactorily completed will be credited by the State Department of Education toward meeting the minimum requirements of professional preparation as follows:

(1) For teaching in the elementary schools of the State, including renewal of certificates and advancing the grade of certificates.

(2) For teaching in high schools of the State and for renewal of high school certificates.

(3) For teaching vocational agricultural and home economics and for renewal of vocational teachers' certificates.

(4) For high school principalships.

(5) For elementary school principalships.

Summer Graduate Work

Special arrangements have been made for persons wishing to do graduate work in summer. Teachers and other graduate students working for a degree on the summer plan must meet the same requirements and proceed in the same way as do students enrolled in the other sessions of the University.

For detailed information in regard to the Summer Session consult the special Summer School announcement, issued annually in April.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ALVAN C. GILLEM, JR., *Major Infantry (D.O.L.), U. S. Army, Professor*

RESERVE OFFICERS' TRAINING CORPS

The work in this department is based upon the provisions of Army Regulations No. 145-10, War Department.

Authorization

An infantry unit of the Senior Division of the Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended.

Object

The primary object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. It is intended to attain this object during the time the students are pursuing their general or professional studies with the least possible interference with their civil careers, by employing methods designed to fit men physically, mentally, and morally for pursuits of peace as well as pursuits of war. It is believed that such military training will aid greatly in the development of better citizens.

Advanced Work

Students who complete the basic course satisfactorily and who are recommended by the Professor of Military Science and Tactics, and whose application is approved by the President, may continue their military training for a period of two years in the Advanced Course.

Time Allotted

For first and second year, basic course, three periods a week of not less than one hour each are devoted to this work, of which at least one hour is utilized for theoretical instruction.

For third and fourth years, advanced course, elective, five periods a week of not less than one hour each are devoted to this work, of which at least three periods are utilized for theoretical instruction.

Physical Training

Physical training forms an important part in military instruction, and it is the policy of the Military Department to encourage and support the physical training given by civilian teachers, thus cooperating in an effort to promote a vigorous manhood.

Physical Examination

All members of the Reserve Officers' Training Corps are required to be examined physically at least once after entering the University.

Uniforms

Members of the Reserve Officers' Training Corps must appear in proper uniform at all military formations and at such other times as the Professor of Military Science and Tactics may designate with the approval of the President.

Uniforms, or commutation in lieu of uniforms, for the Reserve Officers' Training Corps, will be furnished free by the Government. The uniforms are the regulation uniforms of the United States Army, with certain distinguishing features; or, if commutation of uniforms is furnished, then such uniform as may be adopted by the University. Such uniforms must be kept in good condition by the students. They remain the property of the Government; and, though intended primarily for use in connection with military instruction, may be worn at any other time unless the regulations governing their use are violated. The uniform cannot be worn in part. Uniforms which are furnished by the Government will be returned to the Military Department at the end of the year or before, if the student leaves the University. In case commutation of uniforms is furnished, the uniform so purchased becomes the property of the students upon completion of two years' work.

Commutation

Those students who elect the advanced course and who have signed the contract with the Government to continue in the Reserve Officers' Training Corps for the two remaining years of the advanced course are entitled to a small per diem money allowance payable quarterly from and including the date of contract until they complete the course at the institution.

Summer Camps

An important and excellent feature of the Reserve Officers' Training Corps is the summer camp. In specially selected parts of the country, camps are held for a period not exceeding six weeks for students who are members of the Reserve Officers' Training Corps. These camps are under the close and constant supervision of army officers, and are intended primarily to give a thorough and comprehensive practical course of instruction in the different arms of the service.

Parents may feel assured that their sons are carefully watched and safeguarded. Wholesome surroundings and associates, work and healthy recreation are the keynote to contentment. Social life is not neglected, and the morale branch exercises strict censorship over all social functions.

The attendance at summer camps is compulsory only for those students who are taking the advanced course, which, as has been previously stated, is elective.

The students who attend the summer camps are under no expense. The Government furnishes transportation from the institution to the camp and from the camp to the institution, or to the student's home, unless the mileage is greater than that from the camp to the institution. In this case, the amount of mileage from the camp to the institution is allowed the student. Quarters and food are furnished. The Advanced Course students, in addition to receiving quarters and food, are paid seventy cents ($0.70) for each day spent in camp. To obtain credit for camp a student must be in attendance at camp at least 85 per cent of the prescribed camp period.

Commissions

(a) Each year, upon completion of the Advanced Course, students qualified for commissions in the Reserve Officers' Corps will be selected by the head of the institution and the professor of Military Science and Tactics.

(b) The number to be selected from each institution and for each arm of the service will be determined by the War Department.

(c) The University of Maryland has received a rating from the War Department of "Generally Excellent" for the past several years. This rating indicates that the work of its R. O. T. C. unit has been recognized by the Federal Government as being of a superior order. The "Generally Excellent" rating supersedes the former designation of "Distinguished College," which designation has been discontinued by the War Department.

Credits

Military instruction at this University is on a par with other university work, and the requirements of this department as to proficiency the same as those of other departments.

Those students who have received military training at any educational institution under the direction of an army officer detailed as professor of military science and tactics may receive such credit as the professor of military science and tactics and the President may jointly determine.

PHYSICAL EDUCATION, RECREATION, AND ATHLETICS

The purpose of the program of physical education at the University is broadly conceived as the development of the individual student. To accomplish this purpose, physical examinations and classification tests are given the incoming students to determine the relative physical fitness of each student. Upon the basis of the needs disclosed by these tests, and individual preferences, students are assigned to the various activities of the program.

Freshmen and sophomores assigned to physical education take three activity classes each week throughout the year. In the fall, soccer, touch football, and playground baseball are the chief activities; in the winter, basketball, volley ball, and other team games; and in the spring, track, baseball, and tennis. In addition to these team activities, sophomore students may elect a considerable number of individual sports, such as fencing, boxing, wrestling, horseshoes, ping pong, bag punching, and the like.

An adequate program of intramural sports is conducted, also. Touch football in the fall, basketball in the winter, and baseball in the spring are the chief activities in this program. Cups and medals are provided for the winning teams and individual members, and appropriate awards in all tournaments of the program.

Every afternoon of the school session the facilities of the Physical Education Department are thrown open to all students for free and unorganized recreation. Floor hockey, indoor baseball, basket shooting, apparatus work, fencing, boxing, wrestling, bag punching, tennis, touch football, and track are the most popular contests sponsored in this manner.

The University is particularly fortunate in its possession of excellent facilities for carrying on the activities of the program of physical education. A large modern gymnasium, a new field house, a number of athletic fields, tennis courts, baseball diamonds, running tracks, and the like, and an athletic plant provided solely for the program of physical education conducted for the girls constitute the equipment.

In addition to the activities described above, the University sponsors a full program of intercollegiate athletics for men. Competition is promoted in varsity and freshman football, basketball, baseball, track, cross country running, boxing, lacrosse, and tennis, which are all major sports of this program. The University is a member of the Southern Conference, the National Collegiate Athletic Association, and other national organizations for the promotion of amateur athletics.

The University also maintains curricula designed to train men and women students to teach physical education and coach in the high schools of the State.

For a description of the courses in Physical Education, see College of Education, and Section III, Description of Courses.

Physical Education for Women

Physical Education is required of all freshmen and sophomore women at the University of Maryland, except such as are excused by the college physician. Academic credit is given for all Physical Education.

The aims of the Department of Physical Education for Women are as follows: to develop strong, organically sound bodies; to develop bodies with good neuromuscular control, which will react favorably to such situations as arise; and to establish those ideals and standards of living which shall enable each girl to "live best and serve most".

To the above ends, the Department of Physical Education for Women offers instruction in sports such as hockey, soccer, basketball, speedball, and archery; stunts, tumbling, and such natural activities as are inherent to the race; as well as folk, clog, and athletic dancing.

An opportunity is given to every girl in the University to participate in sports and to make a class team, provided she is physically fit. Under the direction of the Athletic Association for Women, a point system is in operation and awards are given.

In addition to required Physical Education, a major department is being organized, and advanced courses in sports, games, natural activities, methods of teaching Physical Education, and dancing are being given.

The girls have a modern gymnasium, with ample locker and shower rooms. An athletic field and several tennis courts are in the process of construction directly behind the gymnasium. When these are completed, all of the out-of-door sports will be carried on there.

SCHOOL OF DENTISTRY

J. Ben Robinson, Dean.

Faculty Council

George M. Anderson, D.D.S., F.A.C.D.
Robert P. Bay, M.D.
Horace M. Davis, D.D.S., F.A.C.D.
Oren H. Gaver, D.D.S., F.A.C.D.
Edward Hoffmeister, A.B., Phar. G., D.D.S.
Burt B. Ide, D.D.S., F.A.C.D.
Howard J. Maldeis, M.D.
Robert L. Mitchell, Phar. G., M.D.
Alexander H. Paterson, D.D.S., F.A.C.D.
J. Ben Robinson, D.D.S., F.A.C.D.
Leo A. Walzak, D.D.S.

The University of Maryland was created by an act of the Maryland Legislature, December 18, 1807, for the purpose of offering a course of instruction in medical science. There were at that period but four medical schools in America—the University of Pennsylvania, founded in 1765; Harvard University, in 1782; Dartmouth College, in 1798, and the College of Physicians and Surgeons of New York, May, 1807.

The first lectures on dentistry in America were delivered by Dr. Horace H. Hayden in the University of Maryland, School of Medicine, between the years 1821 and 1825. These lectures were interrupted in 1825 by internal dissension in the School of Medicine, but were continued in the year 1837. It was Dr. Hayden's idea that dentistry merited greater attention than had been given it by medical instruction, and he undertook to develop this specialty as a branch of medicine. With this thought in mind he, with the support of Dr. Chapin A. Harris, appealed to the Faculty of Physic of the University of Maryland for the creation of a department of dentistry as a part of the medical curriculum. The request having been refused, an independent college was decided upon. A charter was applied for, and granted by the Maryland Legislature February 1, 1840. The first faculty meeting was held February 3, 1840; at which time Dr. H. H. Hayden was elected President and Dr. C. A. Harris, Dean. The introductory lecture was delivered by Dr. Harris on November 3, 1840, to the five students matriculated in the first class. Thus was the Baltimore College of Dental Surgery, the first and oldest dental school in the world, created as the foundation of the present dental profession.

In 1873, the Maryland Dental College, an offspring of the Baltimore College of Dental Surgery, was organized, and continued instruction in dental subjects until 1879, when it was consolidated with the Baltimore College of Dental Surgery. A department of dentistry was organized at the University of Maryland in the year 1882, graduating its first class in

1883 and a class each subsequent year to 1923. This school was chartered as a corporation and continued as a privately owned and directed institution until 1920, when it became a State institution. The Dental Department of the Baltimore Medical College was established in 1895, continuing until 1913, when it merged with the Dental Department of the University of Maryland.

The final combining of the dental educational interests of Baltimore was effected June 15, 1923, by the amalgamation of the student bodies of the Baltimore College of Dental Surgery and the University of Maryland, School of Dentistry, the Baltimore College of Dental Surgery becoming a distinct department of the State University under State supervision and control. Thus we find in the Baltimore College of Dental Surgery, Dental School, University of Maryland, a merging of the various efforts at dental education in Maryland. From these component elements have radiated developments of the art and science of dentistry until the potential strength of its alumni is second to none either in numbers or degree of service to the profession.

BUILDING

The School of Dentistry now occupies its new building at the northwest corner of Lombard and Greene Sts., immediately facing the University Hospital, and so situated that it offers splendid opportunity for abundant clinic material. The new building provides approximately 45,000 square feet of floor space, is fire proof, and is splendidly lighted and ventilated. A sufficient number of large lecture rooms and classrooms, a library and reading room, science laboratories, technic laboratories, clinic rooms, locker rooms, etc., are provided. The building is furnished with new equipment throughout with every accommodation necessary for satisfactory instruction under comfortable arrangements and pleasant surroundings. The large clinic wing will accommodate one hundred and thirty-six chairs. The following clinic departments have been provided: Operative, Prosthetic (including Crown and Bridge and Ceramics), Anesthesia and Surgery, Pathology, Orthodontia, Pedodontia, Radiodontia, and Photography. Modern units with electric engines have been installed in all clinics, while provision has been made for the use of electric equipment in all technic laboratories.

Requirements for Matriculation

The School of Dentistry is a member in good standing of the American Association of Dental Schools, and conforms to the rules and regulations of that body.

The present requirement for matriculation in the School of Dentistry is graduation from an accredited high school with fifteen units of credit, accompanied by a certificate from the principal of the high school that the applicant is in every way qualified to do college work. This requirement will admit students to the five-year course in dentistry, now being required.

Applicants for matriculation must present their credentials for verification to the Registrar of the University of Maryland, Baltimore, Maryland.

A blank form for submitting credentials may be had by applying to the Dean of the School of Dentistry. The blank must be filled out in full as indicated by various items on the form, signed by the prospective dental student, and returned to the Registrar's office with the $2.00 investigation fee.

Length of Course

A five-year course of instruction is offered. The many obvious advantages in the consecutive five years of professional study over the one year of college work and four years of dentistry, or the two years of college work and three years of dentistry, offered by most dental schools, has influenced the adoption of the five-year plan. Admission to advanced standing may be secured by offering acceptable college credits for academic requirements appearing in the first year.

Advanced Standing

Applicants showing in addition to high school requirements, college credits of equal value in courses contained in the dental curriculum may receive advanced credit on those subjects. Thirty semester hours of college credit entitle the applicant to second-year rating, with the opportunity to complete the course in four years, provided his college record shows the following to the credit of the applicant:

Inorganic Chemistry	**8 hours**
Zoology	**8 hours**
Mathematics	**6 hours**
English	**6 hours**

Graduates from reputable and accredited colleges and universities or those with at least two years completed work from Class A medical schools, will be given advanced credit in completed subjects and advanced standing in the course.

A student who desires to transfer to this school from another recognized dental school must present credentials signed by the Dean, Secretary, or Registrar of the school from which he is transferring. No student who has incurred a condition or a failure in any subject at the school from which he desires to transfer will be accepted. The student transferring must furnish evidence that he is in possession of the necessary high school credits.

Attendance Requirements

In order to receive credit for a full session, each student must have entered and be in attendance on the day the Regular Session opens, at which time lectures to all classes begin, and remain until the close of the session, the dates for which are announced in the Calendar of the Annual Catalogue.

Regular attendance is demanded of all students. Students with less than eighty-five per cent. attendance in any course will be denied the privilege of final examination in any and all such courses. In certain unavoidable circumstances of absence the Dean may honor excuses, but students with less than a minimum of eighty-five per cent. attendance will not be promoted to the next succeeding class.

In cases of serious personal illness, as attested by a physician, students may register not later than the twentieth day following the advertised opening of the Regular Session. Students may register and enter not later than ten days after the beginning of the session, but such delinquency will be charged as absence from the class.

Promotion

To be promoted to the next succeeding year, a student must have passed courses amounting to at least 80 per cent. of the total scheduled hours of the year, and must have an average of 80 per cent. on all subjects passed.

A grade of 75 per cent. is passing. A grade between 60 per cent. and passing is a condition. A grade below 60 per cent. is a failure. A condition may be removed by a re-examination. In such effort, failure to make a passing mark is recorded as a failure in the course. A failure can be removed only by repeating the course. A student with combined conditions and failures amounting to 40 per cent. of the scheduled hours of the year will not be permitted to proceed with his class. Students carrying conditions will not be admitted to senior standing; students in all other classes may carry one condition to the next succeeding year. All conditions and failures must be removed within 12 months from the time they were incurred.

Equipment

A complete list of necessary instruments and materials for technic and clinic courses and textbooks for lecture courses will be announced for the various classes. Each student will be required to provide himself with whatever is necessary to meet the needs of his course and present same to a responsible class officer for inspection. No student will be permitted to go on with his class who does not meet this requirement.

Deportment

The profession of dentistry demands, and the School of Dentistry requires, evidence of good moral character of its students. The conduct of the student in relation to his work and fellow-students will indicate his fitness to be taken into the confidence of the community as a professional man. Integrity, sobriety, temperate habits, truthfulness, respect for authority and associates, honesty in the transaction of business affairs as a student will be considered as evidence of good moral character necessary to the granting of a degree.

Requirements for Graduation

The degree of Doctor of Dental Surgery is conferred upon every candidate who has fully met the following conditions:

1. Documentary evidence that he has attained the age of 21 years.

2. A candidate for graduation shall have completed a full five-year course of study, the first year of which shall include 30 semester hours of college work as outlined in the course of study in force in this school, or shall present one full year of college work for admission and four years study in the dental curriculum, the last year of which shall have been spent in this institution.

3. He will be required to show a general average of 80 per cent. during the full course of study.

4. He shall have satisfied all technic and clinic requirements of the various departments.

5. He shall have paid all indebtedness to the college prior to the beginning of final examinations, and must have adjusted his financial obligations in the community satisfactorily to those to whom he may be indebted.

Fees

Application fee (paid at time of filing formal application for admission)	$2.00
Matriculation fee (paid at time of enrollment)	10.00
Tuition for the session, resident student	250.00
Tuition for the session, non-resident student	300.00
Dissecting fee (first semester, sophomore year)	15.00
Laboratory fee (each session)	20.00
Locker fee—freshman, sophomore, and pre-junior years (first semester)	3.00
Locker fee—junior and senior years (first semester)	5.00
Laboratory breakage deposit—freshman, sophomore, pre-junior and junior years (first semester)	5.00
Graduation fee (paid with second semester fees of senior year)	15.00
Penalty fee for late registration	5.00
Examinations taken out of class and re-examinations	5.00
One certified transcript of record will be issued to each student free of charge. Each additional copy will be issued only on payment of	1.00
Matriculation fee must be paid prior to September 15.	

The registration of a student in any school or college of the University shall be regarded as a registration in the University of Maryland, but when such student transfers to a Professional School of the University or from one Professional School to another, he must pay the usual matriculation fee required by each Professional School.

A student who neglects or fails to register prior to or within the day or days specified for his or her school, will be called upon to pay a fine of $5.00. The last day of registration with fine added to regular fees is Saturday at noon of the week in which instruction begins, following the specified registration period. (This rule may be waived only on the written order of the Dean).

All students are required to fill in a registration card for the office of the Registrar, and pay to the Comptroller one-half of the tuition fee in addition to all other fees noted as payable first semester before being admitted to class work at the opening of the session. The balance of tuition and second semester fees must be in the hands of the Comptroller on the registration day for the second semester.

According to the policy of the Dental School no fees will be returned. In case the student discontinues his course, any fees paid will be credited to a subsequent course, but are not transferable.

The above requirements will be rigidly enforced.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students if, at the time of their registration their parents* have been residents of this State for at least one year.

Adult students are considered to be resident students if, at the time of their registration, they have been residents of this State for at least one year.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal residents of this State by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

THE GORGAS ODONTOLOGICAL SOCIETY

The Gorgas Odontological Society was organized in 1914 as an honorary student dental society with scholarship as a basis for admission. The society is named after Dr. Ferdinand J. S. Gorgas, a pioneer in dental education, a teacher of many years' experience, and during his life a great contributor to dental literature. It was with the idea of perpetuating his name that the society adopted it.

Students become eligible for membership at the beginning of their junior year in the dental school, if, during their preceding years, they have attained an average of 85 per cent. or more in all of their studies. Meetings are held once each month and are addressed by prominent dental and medical men, an effort being made to obtain speakers not connected with the University. In this way, the members have an opportunity, even while students, to hear men associated with other educational institutions.

OMICRON KAPPA UPSILON

Phi Chapter of Omicron Kappa Upsilon honorary dental fraternity was chartered at the Baltimore College of Dental Surgery, Dental School, University of Maryland, during the session of 1928-29. Membership in the fraternity is awarded to a number not exceeding twelve per cent., of the graduating class. This honor is conferred upon those students who through their professional course of study creditably fulfill all obligations as students, and whose conduct, earnestness, and evidence of good character and high scholarship recommend them to election.

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* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of or stand in loco parentis to such minor students.

SCHOLARSHIPS

A number of scholarships from various organizations and educational foundations have been available to students in the School of Dentistry. These scholarships have been secured on the basis of excellence in scholastic attainment and the need on the part of students for assistance in completing their course in dentistry. It has been the policy of the Faculty to recommend only students in the last two years for such privileges.

The Henry Strong Educational Foundation—From this fund, established under the will of General Henry Strong of Chicago, an annual allotment is made to the Baltimore College of Dental Surgery, Dental School, University of Maryland, for loan scholarships available for the use of young men and women students, under the age of twenty-five. Recommendations for the privileges of these scholarships are limited to students in the junior and senior years. Only those students who through stress of circumstances require financial aid and who have demonstrated excellence in educational progress are considered in making nominations to the Secretary of this fund.

The Edward S. Gaylord Educational Endownment Fund—Under a provision of the will of the late Dr. Edward S. Gaylord of New Haven, Conn., an amount approximating $16,000 was left to the Baltimore College of Dental Surgery, Dental School, University of Maryland, the proceeds of which are to be devoted to aiding worthy young men in securing dental education.

THE SCHOOL OF LAW

ROGER HOWELL, *Dean.*

THE FACULTY COUNCIL

HON. HENRY D. HARLAN, A.M., LL.B., LL.D.
RANDOLPH BARTON, JR., Esq., A.B., LL.B.
EDWIN T. DICKERSON, Esq., A.M., LL.B.
CHARLES MCHENRY HOWARD, Esq.,A.B., LL.B.
HON. MORRIS A. SOPER, A.B., LL.B.
HON. W. CALVIN CHESTNUT, A.B., LL.B.
G. RIDGELY SAPPINGTON, Esq., LL.B.
ROGER HOWELL, Esq., A.B., Ph.D., LL.B.
EDWIN G. W. RUGE, Esq., A.B., L.L.B.
A. J. CASNER, A.B., LL.B.
G. KENNETH REIBLICH, A.B., Ph.D., J.D.

While the first faculty of law of the University of Maryland was chosen in 1813, and published in 1817 "A Course of Legal Study Addressed to Students and the Profession Generally," which the North American Review pronounced to be "by far the most perfect system for the study of law which has ever been offered to the public," and which recommended a course of study so comprehensive as to require for its completion six or seven years, no regular school of instruction in law was opened until 1823. The institution thus established was suspended in 1836 for lack of proper pecuniary support. In 1869 the School of Law was organized, and in 1870 regular instruction therein was again begun. From time to time the course has been made more comprehensive, and the staff of instructors increased in number. Its graduates now number more than three thousand, and included among them are a large proportion of the leaders of the Bench and Bar of the State and many who have attained prominence in the profession elsewhere.

The Law School has been recognized by the Council of the Section of Legal Education of the American Bar Association as meeting the standards of the American Bar Association, and has been placed upon its approved list.

The Law School is a member of the Association of American Law Schools, an association composed of the leading law schools in the United States, member schools being required to maintain certain high standards relating to entrance requirements, faculty, library, and curriculum.

The Law School is also registered as an approved school on the New York Regents' list.

The new Law School Building, erected in 1931, is located at Redwood and Greene Streets in Baltimore. In addition to classrooms and offices for the Law faculty, it contains a large auditorium, practice-court room, students' lounge and locker rooms, and the law library, the latter containing a collection of carefully selected text-books, English and American reports, leading legal periodicals, digests, and standard encyclopedias. No fee is charged for the use of the library, which is open from 9.00 A. M. to 10.30 P. M., except on Saturday, when it closes at 5.00 P. M.

Course of Instruction

The School of Law is divided into two divisions, the Day School and the Evening School. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same.

The Day School course covers a period of three years of thirty-two weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The Practice Court sessions are held on Monday evenings from 8.00 to 10.00 P. M.

The Evening School course covers a period of four years of forty weeks each, exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evenings of each week from 6.30 to 9.30 P. M. This plan leaves the alternate evenings for study and preparation by the student.

The course of instruction in the School of Law is designed thoroughly to equip the student for the practice of his profession when he attains the Bar. Instruction is offered in the various branches of the common law, of equity, of the statute law of Maryland, and of the public law of the United States. The course of study embraces both the theory and practice of the law, and aims to give the student a broad view of the origin, development, and function of law, together with a thorough practical knowledge of its principles and their application. Analytical study is made of the principles of substantive and procedural law, and a carefully directed practice court enables the student to get an intimate working knowledge of procedure.

Special attention is given to the statutes in force in Maryland, and to any peculiarities of the law in that State, where there are such. All of the subjects upon which the applicant for the Bar in Maryland is examined are included in the curriculum. But the curriculum includes all of the more important branches of public and private law, and is well designed to prepare the student for admission to the Bar of other States.

Requirements for Admission

The requirements for admission are those of the Association of American Law Schools. Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least two years of college work; that is, the completion of at least one-half the work acceptable for a Bachelor's degree granted on the basis of a four-year period of study by the University of Maryland or other principal college or university in this State.

To meet this requirement, a candidate for admission must present at least sixty semester hours (or their equivalent) of college work taken in an institution approved by standard regional accrediting agencies and exclusive of credit earned in non-theory courses in military science, hygiene, domestic arts, physical education, vocal or instrumental music, or other courses without intellectual content of substantial value. Such pre-legal work must be work done in residence and no credit is allowed for work done in correspondence or extension courses.

In compliance with the rules of the Association of American Law Schools, a limited number of special students, not exceeding 10 percent of the average number of students admitted as beginning regular law students during the two preceding years, applying for admission with less than the academic credit required of candidates for the law degree, may be admitted as candidates for the certificate of the school, but not for the degree, where, in the opinion of the Faculty Council, special circumstances, such as the maturity and apparent ability of the student, seem to justify a deviation from the rule requiring at least two years of college work. Such applicants must be at least twenty-three years of age and specially equipped by training and experience for the study of law.

Combined Program of Study Leading to the Degrees of Bachelor of Arts and Bachelor of Laws

The University offers a combined program in arts and law leading to the degrees of Bachelor of Arts and Bachelor of Laws.

Students pursuing this combined program in college and pre-legal subjects will spend the first three years in the College of Arts and Sciences at College Park. The fourth year they will register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work in the Evening School, the degree of Bachelor of Arts will be awarded. The degree of Bachelor of Laws will be awarded upon the completion of the work prescribed for graduation in the School of Law.

Details of the combined course may be had upon application to the Registrar, University of Maryland, College Park, Md., or by reference to page 99.

Advanced Standing

Students complying with the requirements for admission to the school who have, in addition, successfully pursued the study of law elsewhere in an approved law school, may, in the discretion of the Faculty Council, upon presentation of a certificate from such law school showing an honorable dismissal therefrom, and the successful completion of equivalent courses therein, covering at least as many hours as are required for such subjects in this school, receive credit for such courses and be admitted to advanced standing. No credit will be given for study pursued in a law office, and no degree will be conferred until after one year of residence and study at this school.

Fees and Expenses

The charges for instruction are as follows:

Registration fee to accompany application	$ 2.00
Matriculation fee, payable on first registration	10.00
Diploma fee, payable upon graduation	15.00
Locker fee	3.00
Tuition fee, per annum:	
Day School	$200.00
Evening School	150.00

An additional tuition fee of $50.00 per annum must be paid by students who are non-residents of the State of Maryland.

The tuition fee is payable in two equal instalments, one-half at the time of registration for the first semester, and one-half at the time of registration for the second semester.

Further information and a special catalogue of the School of Law may be had upon application to the School of Law, University of Maryland, Redwood and Greene Streets, Baltimore, Md.

THE UNIVERSITY OF MARYLAND
SCHOOL OF MEDICINE
AND
COLLEGE OF PHYSICIANS AND SURGEONS

J. M. H. Rowland, *Dean.*

MEDICAL COUNCIL

Arthur M. Shipley, M.D., Sc.D.
Gordon Wilson, M.D.
William S. Gardner, M.D.
Standish McCleary, M.D.
Julius Friedenwald, A.M., M.D.
J. M. H. Rowland, M.D.
Alexius McGlannan, A.M., M.D., LL.D.
Hugh R. Spencer, M.D.
H. Boyd Wylie, M.D.
Carl L. Davis, M.D.
William H. Schultz, Ph.B., Ph.D.
Maurice C. Pincoffs, S.B., M.D.
Frank W. Hachtel, M.D.
Edward Uhlenhuth, Ph.D.
Clyde A. Clapp, M.D.

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837); and here were first installed independent chairs for the teaching of diseases of women and children (1867), and of eye and ear diseases (1873).

This School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for senior students first was established.

Clinical Facilities

The University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye cases.

Besides its own hospital, the School of Medicine has control of the clinical facilities of the Mercy Hospital, in which were treated last year 27,313 persons.

In connection with the University Hospital, an outdoor obstetrical clinic is conducted. During the past year 1,656 cases were treated in the hospital and outdoor clinic.

The hospital now has about 250 beds—for medical, surgical, obstetrical, and special cases; and furnishes an excellent supply of clinical material for third- and fourth-year students.

Dispensaries and Laboratories

The dispensaries associated with the University Hospital and Mercy Hospital are organized on a uniform plan in order that teaching may be the same in each. Each dispensary has departments of Medicine, Surgery, Obstetrics, Children, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopedics, Proctology, Dermatology, Throat and Nose, and Tuberculosis. All students in their junior year work two days of each week in one of these dispensaries; all students in the senior year work one hour each day; 113,363 cases were treated last year, which fact gives an idea of the value of these dispensaries for clinical teaching.

Laboratories conducted by the University purely for medical purposes are the Anatomical, Chemical, Experimental Physiology, Physiological Chemistry, Histology and Embryology, Pathology, Bacteriology and Immunology, Clinical Pathology, Pharmacology, and Operative Surgery.

Prizes and Scholarships

The following prizes and scholarships are offered in the School of Medicine. (For details see School of Medicine Bulletin.)

Faculty Medal: Dr. A. Bradley Gaither Prize; The Dr. Samuel Leon Frank Scholarship; Hitchcock Scholarships; The Randolph Winslow Scholarship; The University Scholarships; The Frederica Gehrmann Scholarship; The Dr. Leo Karlinsky Scholarship; The Clarence and Genevra Warfield Scholarships; Israel and Cecilia A. Cohen Scholarship; Daughters of Harmony Scholarship.

Requirements for Admission

Admission to the curriculum in medicine is by a completed Medical Student Certificate issued by the Registrar of the University of Maryland, Baltimore, Maryland. This certificate is obtained on the basis of satisfactory credentials, or by examination and credentials, and is essential for admission to any class.

The requirements for the issuance of the Medical Student's Certificate are as follows:

(a) The completion of a standard four-year high school course or the equivalent, and in addition:

*(b) Two years, sixty semester hours of basic college credits, including chemistry, biology, physics, modern foreign language, and English, and exclusive of Military Drill or Physical Education as outlined in the Pre-Medical Curriculum, or its equivalent, will meet the minimum requirement for admission. Students are strongly recommended, however, to complete the three-year pre-medical curriculum of 99 semester hours before making application for admission.

Women are admitted to the School of Medicine of this University.

Expenses

The following are the fees for students in the School of Medicine:

	Tuition			
Matriculation	*Resident*	*Non-Resident*	*Laboratory*	*Graduation*
$10.00 (only once)	$350.00	$500.00	$25.00 (yearly)	$15.00

Estimated living expenses for students in Baltimore:

Items	*Low*	*Average*	*Liberal*
Books	$50	$75	$100
College Incidentals	20	20	20
Board, eight months	200	250	275
Room rent	64	80	100
Clothing and laundry	50	80	150
All other expenses	25	50	75
Total	$409	$556	$720

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* For admission to the Pre-Medical Curriculum the requirements are the same as for the freshman class in the College of Arts and Sciences of the University with the prescribed addition of two years of one foreign language. (See Section I, "Entrance.")

SCHOOL OF NURSING

Annie Crighton, *R.N., Director and Superintendent of Nurses.*

The University of Maryland School of Nursing was established in the year 1889. Since that time it has been an integral part of the University of Maryland Hospital.

The school is non-sectarian, the only religious services being morning prayers.

The University of Maryland Hospital is a general hospital containing about 275 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing, including experience in the operating room.

The school offers the student nurse unusual advantages in its opportunity for varied experience and in its thorough curriculum taught by well-qualified instructors and members of the medical staff of the University.

Programs Offered

The program of study of the School is planned for two groups of students: (a) The three-year group; (b) the five-year group.

Requirements for Admission

A candidate for admission to the School of Nursing must be a graduate of an accredited high school or other recognized preparatory school, and must present record showing that she has completed satisfactorily the required amount of preparatory study. Preference will be given to students who rank in the upper third of the graduating class in their respective preparatory schools.

Candidates are required to present 15 units for entrance: Required (7), and Elective (8).

Required: English (I, II, III, IV), 3 units; algebra to quadratics, 1 unit; plane geometry, 1 unit; history, 1 unit; science, 1 unit. Total, 7 units.

Elective: Astronomy, biology, botany, chemistry, civics, drawing, economics, general science, geology, history, home economics vocational subjects, languages, mathematics, physical geography, physics, zoology, or any other subject offered in a standard high school or preparatory school for which graduation credit is granted toward college or university entrance. Eight units must be submitted from this group, of which not more than four units may pertain to vocational subjects.

In addition to the above, students must meet certain other definite requirements in regard to health, age, and personal fitness for nursing work.

The preferable age for students registering for the three-year course is 20 to 35 years, although students may be accepted at the age of 18.

Women of superior education and culture are given preference, provided they meet the requirements in other particulars. If possible, a personal interview with the Director of the School should be arranged on Tuesday or Friday from 11:00 A. M. to 12:00 M.

Blank certificates will be furnished upon application to the Director of the School of Nursing, University of Maryland Hospital, Baltimore, Maryland.

Registration With Maryland State Board of Examiners of Nurses

By regulation of the Maryland State Board of Examiners of Nurses, all students entering schools of nursing in Maryland must, at the beginning of their course, register with the Board in order to be eligible for examination and license on completion of this course. Blanks necessary for this purpose will be sent with application forms. A fee of $2 is charged for registration.

The fitness of the applicant for the work and the propriety of dismissing or retaining her at the end of her term of probation are left to the decision of the Director of the School. Misconduct, disobedience, insubordination, inefficiency, or neglect of duty are causes for dismissal at any time by the President of the University.

The requirements for admission to the five-year program of the School of Nursing are the same as for other colleges. (Special catalog will be sent upon request.) The three-year program is designed to meet the requirements for the diploma in Nursing and comprises the work of the first, second, and third hospital years.

Admission to the School

Students for the spring term are admitted in February and those for the fall term in September or October, and for the five-year course in September.

Hours of Duty

During the preparatory period the students are engaged in class work for the first four months with no general duty in the hospital, and for the remainder of this period they are sent to the wards on eight-hour duty. During the first, second, and third years the students are on eight-hour day duty and nine-hour night duty with six hours on holidays and Sundays. The night-duty periods are approximately two months each with one day at the termination of each term for rest and recreation. The period of night duty is approximately five to six months during the three years.

The first four months of the preparatory period are devoted to theoretical instruction given entirely in the lecture and demonstration rooms of the training school, hospital, and medical school laboratories. The average number of hours per week in formal instruction, divided into lecture and laboratory periods, is 30 hours, and includes courses in Anatomy, Physiology, Cookery and Nutrition, Dosage and Solution, Hygiene, Bacteriology, Chemistry, Materia Medica, Practical Nursing, Bandaging, Ethics, and History of Nursing. During the last two months of the probation period the students are placed on duty in the hospital wards for instruction in bedside nursing, and are expected to perform the duties assigned to them by the Director of the School. At the close of the first semester the students are required to pass satisfactorily both the written and practical tests; failure to do so will be sufficient reason for terminating the course at this point.

Sickness

A physician is in attendance each day, and when ill all students are cared for gratuitously. The time lost through illness in excess of two weeks, during the three years, must be made up. Should the authorities of the school decide that through the time lost the theoretical work has not been sufficiently covered to permit the student to continue in that year, it will be necessary for her to continue her work with the next class.

Vacations

Vacations are given between June and September. A period of three weeks is allowed the student at the completion of the first year and four weeks at the completion of the second year.

Expenses

A fee of $30.00, payable on entrance, is required from all students. This will not be returned. A student receives her board, lodging, and a reasonable amount of laundry from the date of entrance. During her period of probation she provides her own uniforms, obtained through the hospital at a nominal cost. After being accepted as a student nurse she wears the uniform supplied by the hospital. The student is also provided with textbooks and shoes. Her personal expenses during the course of training and instruction will depend entirely upon her individual habits and tastes.

THREE-YEAR PROGRAM

First Year

The first year is divided into two periods: the first semester, or the preparatory period (6 months), and the second semester.

First Semester

In the first semester, or preparatory term, the student is given practical instruction in the following:

I. The making of hospital and surgical supplies, the cost of hospital material, apparatus, and surgical instruments.

II. Household economics and preparation of foods particularly applied to invalid cooking and nutrition.

During this term the practical work is done under constant supervision, and teaching is given correlatively.

Excursions are made to filtration and sewerage plants, markets, hygienic dairies, linen rooms, laundry, and store room.

At the close of the first half of the first year the students are required to pass satisfactorily both written and oral tests, and failure to do so will be sufficient reason for terminating the course at this point.

Subsequent Course

The course of instruction, in addition to the first semester, or the preparatory period, occupies two and one-half years, and students are not accepted for a shorter period, except in special instances.

After entering the wards, the students are constantly engaged in practical work under the immediate supervision and direction of the head nurses and instructors.

Throughout the three years, regular courses of instruction and lectures are given by members of the medical and nursing school faculties.

First Year

Second Semester

During this period the students receive theoretical instruction in Massage, General Surgery, Urinalysis and Laboratory Methods, Diet in Disease, and Advanced Nursing Procedures.

Practical instruction is received in the male and female, medical, surgical, and children's wards.

Second Year

During this period the theoretical instruction includes Pediatrics, General Medicine, Infectious Diseases, Obstetrics, Gynecology, Orthopedics, Skin and Venereal, Eye, Ear, Nose, and Throat, X-ray and Radium, and Dental. The practical work provides experience in the nursing of obstetrical and gynecological patients, in the operating rooms and the out-patient department.

Third Year

Theoretical instruction includes Psychiatry, Public Sanitation, Professional Problems, and Survey of the Nursing Field.

During this period the student receives short courses of lectures on subjects of special interest. These include a consideration of the work of institutions, of public and private charities, of settlements and the various branches of professional work in nursing.

Experience is given in executive and administration work for those showing exceptional ability in the Third Year. With these students conferences are held on administration and teaching problems.

Attendance at Classes

Attendance is required at all classes. Absences are excused by the Director of the School only in case of illness or absence from the school.

Examinations

These are both written and oral, and include practical tests. The standing of the student is based upon the general character of work throughout the year as well as the results of the examinations. Students must pass upon all subjects of each year before entering upon the work of the following year.

Graduation

The diploma of the school will be awarded to those who have completed satisfactorily the full term of three years and have passed successfully the final examinations.

Scholarships

One scholarship has been established by the Alumnae of the Training School, which entitles a nurse to a six-weeks course at Teachers College, Columbia University, New York. This scholarship is awarded at the close of the third year to the student whose work has been of the highest excellence, and who desires to pursue post-graduate study and special work. There are two scholarships of the value of $50.00 each, known as the Edwin and Leander M. Zimmerman and the Elizabeth Collins Lee prizes. An Alumnae Pin is presented by the Woman's Auxiliary Board to the student who at the completion of three years shows marked executive ability. A prize of $25.00 is given by Mrs. John L. Whitehurst to the student who at the completion of three years shows exceptional executive ability.

Five-Year Program

In addition to the regular three-year course of training the University offers a combined Academic and Nursing program leading to the degree of Bachelor of Science and a Diploma in Nursing.

The first two years of the course (or pre-hospital period), consisting of 68 semester hours, as shown on page 98 of this catalogue, are spent in the College of Arts and Sciences of the University, during which period the student has an introduction to the general cultural subjects which are considered fundamental in any college training. At least the latter of these two years must be spent in residence at College Park, in order that the student may have her share in the social and cultural activities of college life. The last three years are spent in the School of Nursing in Baltimore or in the Training School of Mercy Hospital, which is also affiliated with the School of Medicine of the University. In the fifth year of the combined program certain elective courses such as Public Health Nursing, Nursing Education, Practical Sociology, and Educational Psychology are arranged.

Degree and Diploma

The Diploma in Nursing will be awarded to those who have completed satisfactorily the three-years' program.

The degree of Bachelor of Science and the Diploma in Nursing are awarded to students who complete successfully the prescribed combined academic and nursing program.

SCHOOL OF PHARMACY

A. G. Du Mez, *Dean.*

Faculty Council

A. G. Du Mez, Ph.G., B.S., M.S., Ph.D.
Glenn L. Jenkins, Ph.G., B.S., M.S., Ph.D.
E. F. Kelly, Phar. D.
Charles C. Plitt, Ph.G., Sc.D.
Marvin R. Thompson, Ph.G., B.S.
J. Carlton Wolf, B.Sc., Phar. D.
B. Olive Cole, Phar. D., LL.B.
H. E. Wich, Phar. D.

The School of Pharmacy began its existence as the Maryland College of Pharmacy. The latter was organized in 1841, and operated as an independent institution until 1904, when it amalgamated with the group of professional schools in Baltimore then known as the University of Maryland. It became a department of the present University when the old University of Maryland was merged with the Maryland State College in 1920. With but one short intermission just prior to 1865, it has continuously exercised its function as a teaching institution.

Location

The School of Pharmacy is located at Lombard and Greene Streets, in close proximity to the Schools of Medicine, Law, and Dentistry.

Policy and Degrees

The chief objective of the school is to prepare its matriculants for the intelligent practice of dispensing pharmacy, but it also endeavors to furnish the instruction necessary to the intelligent pursuit of work in the other branches of the profession and in pharmaceutical research. Upon satisfactory completion of the four years of prescribed work, the degree of Bachelor of Science in Pharmacy (B.S. in Pharm.) is awarded, which admits the holder to the board examinations in the various states for registration as a pharmacist.

Combined Curriculum in Pharmacy and Medicine

A combined curriculum has been arranged with the School of Medicine of the University by which students may obtain the degree of Bachelor of Science in Pharmacy and Doctor of Medicine in seven years. Students who successfully complete the first three years of the course in Pharmacy and an additional four semester hours in Zoology, and show that they are qualified by character and scholarship to enter the medical profession, are eligible for admission into the School of Medicine of the University; and upon the successful completion of the first two years of the medical course will be awarded the degree of Bachelor of Science in Pharmacy by the School of Pharmacy.

This privilege will be open only to students who maintain a uniformly good scholastic record during the first two years of the course in Pharmacy; and those who wish to avail themselves of it must so advise the School of Pharmacy before entering upon the work of the third year.

Recognition

This school holds membership in the American Association of Colleges of Pharmacy. The object of the Association is to promote the interests of pharmaceutical education; and all institutions holding membership must maintain certain minimum requirements for entrance and graduation. Through the influence of this Association, uniform and higher standards of education have been adopted from time to time; and the fact that several States by law or by Board ruling recognize the standards of the Association is evidence of its influence.

The school is registered in the New York Department of Education, and its diploma is recognized in all States.

Requirements for Admission

The applicant must have completed a four-year standard high school course or its equivalent. A minimum age of seventeen years is demanded except when the candidate is a graduate of an accredited high school or of an institution of equal grade.

Admission to the course in Pharmacy is by certificate issued by the Registrar of the University of Maryland, Lombard and Greene Streets, Baltimore, Md. The certificate is issued on the basis of credentials, or by examination, or by both. Evaluation of credentials can be made only by the Registrar, and all applicants, whether their entrance qualifications are clearly satisfactory as per the requirements for matriculation, outlined above, or not, must secure a certificate from the Registrar to be presented to the School of Pharmacy before they can be matriculated.

Applicants should secure an application blank for entrance from the Registrar of the University or from the office of the School of Pharmacy, and return it properly executed at the earliest possible date. Diplomas or certificates need not be sent. The Registrar will secure all credentials desired after the application blank has been received, and the applicant will be notified of the result of the investigation.

Applicants whose credentials do not meet the requirements must pass a satisfactory examination in appropriate subjects given by a recognized College Entrance Examination Board, to make up the required number of units. A fee is charged for these examinations.

Credit will be given in proper amount for pharmaceutical subjects comprising our curriculum to those students coming from schools of pharmacy holding membership in the American Association of Colleges of Pharmacy, provided they present a proper certificate of the satisfactory completion of such subjects and meet the entrance requirements of this school. Credit for general educational subjects will be given to those students presenting evidence of having completed work equal in value to that prescribed.

Requirements for Graduation

1. The candidate must possess a good moral character.
2. He must have completed successfully all of the work specified for the four-year course.
3. The last year of work, at least, must be done in residence.

Matriculation and Registration

The Matriculation Ticket must be procured from the office of the School of Pharmacy, and must be taken out before entering the classes. All students after matriculation are required to register at the Office of the Registrar. The last date of matriculation is October 3d, 1931.

Expenses

Matriculation	*Tuition* *Resident*	*Tuition* *Non-Resident*	*Laboratory and Breakage*	*Graduation*
$10.00 (only once)	$200.00	$250.00	$40.00 (yearly)	$15.00

Tuition for the first semester and laboratory and breakage fee shall be paid to the Comptroller at the time of registration; and tuition for the second semester and graduation fee (the latter returned in case of failure) on or before February 11, 1933.

A bulletin giving details of the course in Pharmacy may be obtained by addressing the School of Pharmacy, University of Maryland, Baltimore, Maryland.

STATE BOARD OF AGRICULTURE

816 Fidelity Building, Baltimore, Maryland.

The law provides that the personnel of the State Board of Agriculture shall be the same as the Board of Regents of the University of Maryland. The President of the University is the Executive Officer of the State Board of Agriculture.

General Powers of Board: The general powers of the Board as stated in Article 7 of the Laws of 1916, Chapter 391, are as follows:

"The State Board of Agriculture shall investigate the conditions surrounding the breeding, raising, and marketing of livestock and the products thereof, and contagious and infectious diseases affecting the same; the raising, distribution, and sale of farm, orchard, forest, and nursery products, generally, and plant diseases and injurious insects affecting the same; the preparation, manufacture, quality analysis, inspection, control, and distribution of animal and vegetable products, animal feeds, seeds, fertilizers, agricultural lime, agricultural and horticultural chemicals, and biological products; and shall secure information and statistics in relation thereto and publish such information, statistics, and the results of such investigations at such times and in such manner as to it shall seem best adapted to the efficient dissemination thereof; and except where such powers and duties are by law conferred or laid upon other boards, commissions, or officials, the State Board of Agriculture shall have general supervision, direction, and control of the herein recited matters, and generally of all matters in any way affecting or relating to the fostering, protection, and development of the agricultural interests of the State, including the encouragement of desirable immigration thereto, with power and authority to issue rules and regulations in respect thereof not in conflict with the Constitution and Laws of the State or the United States, which shall have the force and effect of law, and all violations of which shall be punished as misdemeanors are punished at common law; and where such powers and duties are by law conferred or laid on other governmental agencies may co-operate in the execution and performance thereof, and when so co-operating each shall be vested with such authority as is now or may hereafter by law be conferred on the other. The powers and duties herein recited shall be in addition to and not in limitation of any power and duties which now are or hereafter may be conferred or laid upon said board."

Under the above authority and by special legislation, all regulatory work is conducted under the general authority of the State Board. This includes the following services:

LIVE STOCK SANITARY SERVICE

JAMES B. GEORGE, *Director.*

816 Fidelity Building, Baltimore, Maryland.

This service has charge of the regulatory work in connection with the control of disease among animals. It is authorized by law to control outbreaks of rabies, anthrax, blackleg, scabies, Johne's disease, contagious abortion, etc. This service is also charged, in co-operation with the U. S. Bureau of Animal Industry, with the eradication of bovine tuberculosis. The hog cholera control work, which is conducted in co-operation with federal authorities, is also conducted under the general jurisdiction of this service. Much of the laboratory work necessary in conjunction with the identification of disease among animals is done in the University laboratories at College Park.

STATE HORTICULTURAL DEPARTMENT

College Park, Maryland.

The State Horticultural Law was enacted in 1898. It provides for the inspection of all nurseries and the suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Pathology of the University. The regulatory work is conducted under the authority of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University on account of the close association of the work. The officers of the department are:

E. N. Cory, State Entomologist
C. E. Temple, State Pathologist
T. B. Symons, Director of the Extension Service

FEED, FERTILIZER, AND LIME INSPECTION SERVICE

College Park, Maryland.

The Feed, Fertilizer, and Lime Inspection Service, a branch of the chemistry department of the University, is authorized to enforce the State Regulatory Statutes controlling the purity and truthful labeling of all feeds, fertilizers, and limes that are offered or exposed for sale in Maryland. This work is conducted under the general direction of the chemistry department in charge of Dr. L. B. Broughton.

SEED INSPECTION SERVICE

College Park, Maryland

The Seed Inspection Service is placed by law under the general supervision of the Maryland Experiment Station. This service takes samples of seed offered for sale, and tests them for quality and germination. Mr. F. S. Holmes is in immediate charge of the seed work, with Dr. H. J. Patterson, Director of the Experiment Station.

ASSOCIATED STATE DEPARTMENTS

STATE DEPARTMENT OF FORESTRY

The Department of Forestry was created and organized to protect and develop the valuable timber and tree products of the State, to carry on a campaign of education, and to instruct counties, towns, corporations, and individuals as to the advantages and necessity of protecting from fire and other enemies the timber lands of the State. While the power of the Forestry Department rests with the Regents of the University, acting through the Advisory Board, the detail work is in the hands and under the management of the State Forester, who is secretary of the Board; and all correspondence and inquiries should be addressed to him at 1411 Fidelity Building, Baltimore.

Scientific Staff:

F. W. Besley, State Forester	Baltimore
Karl E. Pfeiffer, Assistant State Forester	Baltimore
Walter J. Quick, Jr., Assistant Forester	Baltimore
Richard Kilbourne, Assistant Forester	College Park

Studies have been made of the timber interests of each of the twenty-three counties; and the statistics and information collected are published for free distribution, accompanied by a valuable timber map. The Department also administers six state forests, comprising about 5,000 acres. The Roadside Tree Law directs the Department of Forestry to care for those trees growing within the right-of-way of any public highway in the State. A State forest nursery, established in 1914 and located at College Park, is under the jurisdiction of this Department.

STATE WEATHER SERVICE

The State Weather Service compiles local statistics regarding climatic conditions and disseminates information regarding the climatology of Maryland under the Regents of the University of Maryland through the State Geologist as successor to the Maryland State Weather Service Commission. The State Geologist is ex-officio Director, performing all the functions of former officers with the exception of Meteorologist, who is commissioned by the Governor and serves as liaison officer with the United States Weather Bureau. All activities except clerical are performed voluntarily. The officers are:

Edward B. Mathews, Director	Baltimore

John R. Weeks, Meteorologist, U. S. Custom House, Baltimore

THE STATE GEOLOGICAL AND ECONOMIC SURVEY

The Geological and Economic Survey Commission is authorized under the general jurisdiction of the Board of Regents of the University of Maryland to conduct the work of this department. The State Geological and Economic Survey is authorized to make:

Topographic surveys showing the relief of the land, streams, roads, railways, houses, etc.

Geological surveys showing the distribution of the geological formations and mineral deposits of the State.

Agricultural soil surveys showing the areal extent and character of the different soils.

Hydrographic surveys to determine the available waters of the State for potable and industrial uses.

Magnetic surveys to determine the variation of the needle for land surveys.

A permanent exhibit of the mineral wealth of the State in the old Hall of Delegates at the State House, to which new materials are constantly added to keep the collection up-to-date.

The following is the staff of the Survey:

Edward B. Mathews, State Geologist	Baltimore
Edward W. Berry, Assistant State Geologist	Baltimore
Charles K. Swartz, Geologist	Baltimore
Joseph T. Singewald, Jr., Geologist	Baltimore
Myra Ale, Secretary	Baltimore
Grace E. Reed, Librarian	Baltimore
Eugene H. Sapp, Clerk	Baltimore

SECTION III.

Description Of Courses

The courses of instruction described in this section are offered at College Park. Those offered in the Baltimore Schools are described in the separate announcements issued by the several schools.

For the convenience of students in making out schedules of studies, the subjects in the following Description of Courses are arranged alphabetically:

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Courses for undergraduates are designated by the numbers 1-99; courses for advanced undergraduates and graduates, 100-199; courses for graduate students, 200-299.

The letter following the number of the course indicates the semester in which the course is offered: thus, 1 f is offered the first semester; 1 s, the second semester; 1 y, the year. A capital S after a course number indicates that the course is offered in the summer session only.

The number of hours' credit is shown by the arabic numeral in parenthesis after the title of the course.

A separate schedule of courses is issued each semester, giving the hours, places of meeting, and other information required by the student in making out his program. Students will obtain these schedules when they register.

Students are advised to consult the statements of the colleges and schools in Section II when making out their programs of studies; also "Regulation of Studies," Section I.

AGRICULTURAL ECONOMICS

Professor DeVault; Assistant Professor Russell

A. E. 1 f. *Agricultural Industry and Resources* (3)—Two lectures; one laboratory. Open to sophomores.

A descriptive course dealing with agriculture as an industry and its relation to climate, physiography, soils, population centers and movements, commercial development, transportation, etc.; the existing agricultural resources of the world and their potentialities, commercial importance, and geographical distribution; the chief sources of consumption; the leading trade routes and markets for agricultural products. The history of American agriculture is briefly reviewed. Emphasis is upon the chief crop and livestock products of the United States.

A. E. 2 f. *Agricultural Economics* (3)—Three lectures. Prerequisite, Econ. 5 f or s.

A general course in Agricultural Economics, with special reference to population trend, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing and co-operation.

A. E. 3 s. *Advertising Agricultural Products* (3)—Three lectures.

Methods of giving publicity to agricultural products held for sale, naming the farm, advertising mediums; trade marks and slogans, roadside markets, demand vs. competition, legal aspects of advertising, advertising costs and advertising campaigns. (Not given in 1932-1933.)

For Advanced Undergraduates and Graduates

A. E. 101 s. *Transportation of Farm Products* (3)—Three lectures.

A study of the development of transportation in the United States, the different agencies for transporting farm products, with special attention to such problems as tariffs, rate structure, and the development of fast freight lines, refrigerator service, truck transportation of agricultural products, etc. Not open to students who have taken or who are taking Econ. 112s. (Russell.)

A. E. 102 s. *Marketing of Farm Products* (3)—Three lectures. Prerequisite, Econ. 5 f or s.

A complete analysis of the present system of transporting, storing, and distributing farm products and a basis for intelligent direction of effort in increasing the efficiency of marketing methods. (DeVault.)

A. E. 103 f. *Co-operation in Agriculture* (3)—Three lectures. Prerequisite, Econ. 5 f or s.

Historical and comparative development of farmers' co-operative organizations with some reference to former movements; reasons for failure and essentials to success; commodity developments; the Federal Farm Board; trend of present tendencies. (Russell.)

A. E. 104 s. *Agricultural Finance* (3)—Three lectures. *Agricultural Credit* requirements; institutions financing agriculture; financing specific farm organizations and industries. *Taxation* of various farm properties; burden of taxation on different industries; methods of taxation; proposals for tax reform. *Farm insurance*—fire, crop, livestock, and life insurance, with especial reference to mutual developments—how provided, benefits, and needed extension. (Russell.)

A. E. 105 s. *Food Products Inspection* (3)—Two lectures; one laboratory.

This course, arranged by the Department of Agricultural Economics in co-operation with the State Department of Markets and the United States Department of Agriculture, is designed to give students primary instruction in the grading, standardizing, and inspection of fruits and vegetables, dairy products, poultry products, and meats. Theoretical instruction covering the fundamental principles will be given in the form of lectures, while the demonstrational and practical work will be conducted through laboratories and field trips to Washington, D. C., and Baltimore. (Staff.)

A. E. 106 f. *Prices* (2)—One lecture; one laboratory.

A general course in prices and price relationships, with emphasis on prices of agricultural products. (Russell.)

A. E. 109 y. *Research Problems* (1-3).

With the permission of the instructor, students will work on any research problems in agricultural economics which they may choose, or a special list of subjects will be made up from which the students may select their research problems. There will be occasional class meetings for the purpose of making reports on progress of work, methods of approach, etc. (DeVault.)

For Graduates

A. E. 201 y. *Special Problems in Agricultural Economics* (3).

An advanced course dealing more extensively with some of the economic problems affecting the farmer; such as land problems, agricultural finance, farm wealth, agricultural prices, transportation, and special problems in marketing and co-operation. (DeVault.)

A. E. 202 y. *Seminar* (1-3).

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and the instructor. (DeVault.)

A. E. 203 y. *Research and Thesis* (8)—Students will be assigned research work in Agricultural Economics under the supervision of the instructor. The work will consist of original investigation in problems of Agricultural Economics, and the results will be presented in the form of a thesis. (DeVault.)

A. E. 205 f. *Advanced Agricultural Geography and Commerce* (2)—One double period a week.

Individual advanced study of agricultural geography from a commodity standpoint. (Not given in 1932-1933.) (Russell.)

A. E. 210 f or s. *Taxation in Relation to Agriculture* (3)—One lecture; two laboratory or practicum periods per week.

Principles and practices of taxation in their relation to agriculture, with special reference to the trends of expenditures and tax levies; taxation in relation to land utilization; taxation in relation to ability to pay and benefits received; methods of assessing property; the general property tax as a major source of revenue; the Federal and State income tax; the gasoline and motor vehicle license tax; the sales tax; the inheritance and gift tax; other sources of revenue; and possibilities of economy in the expenditure of tax revenues. (DeVault and Walker.)

AGRICULTURAL EDUCATION AND RURAL LIFE

PROFESSORS COTTERMAN, CARPENTER; MR. WORTHINGTON, MR. SEABOLD.

For Advanced Undergraduates and Graduates

AG. ED. 101 s. *Observation and the Analysis of Teaching for Agricultural Students* (3)—Two lectures; one laboratory. Open to juniors and seniors; required of juniors in Agricultural Education. Prerequisite, Ed. 101. Cannot be counted toward major for advanced degree in Agricultural Education.

This course deals with an analysis of pupil learning in class groups. It includes a study of pupil and teacher objectives; objectives in secondary education; objectives in vocational education; objectives in vocational agricultural education; individual differences; varying elements in class and classroom situations; lesson patterns; pupil activities and procedures in the class period; measuring results; steps in teaching procedure; types of lessons; classroom management; observation and critiques. (Cotterman and Worthington.)

AG. ED. 102 f. *Course Construction and Project Estimating* (2)—One lecture; one laboratory. Prerequisite, Ag. Ed. 101. Cannot be counted toward major for advanced degree in Agricultural Education.

Factors in the selection of course content; the selection of farm enterprises; the analysis of enterprises and farm jobs for instructional purposes; preparation of teachers' course outlines; the development of directed and supervised practice programs; project forecasting and estimating; systems of project cost accounting; practice in project accounting; the selection of content and lesson plans in terms of cost factors; practice in cost factor analysis; project cost factors as a motivation in day-to-day classroom instruction. (Cotterman and Worthington.)

AG. ED. 103 f. *Teaching Secondary Vocational Agriculture* (3)—Three lectures. Prerequisites, Ag. Ed. 101, 102; A. H. 1, 2; D. H. 1; Poultry 101; Soils 1; Agron. 1, 2; Hort. 1, 11; F. Mech. 101, 104; A. E. 2, 102; F. M. 2. Cannot be counted toward major for advanced degree in Agricultural Education.

Objectives in vocational agricultural education; historical development; place of day class instruction in the high school program of studies; placement programs and the relation of placement to classroom instruction; directed and supervised practice programs; project selection; project study and job analysis; methods of class period, lesson planning; objectives, course content, and methods in evening and part-time classes; equipment; co-curricular activities; advisory committees and departmental goals; co-operative relationships; administrative programs; measuring results; publicity; records and reports. (Cotterman.)

AG. ED. 104 s. *Departmental Organization and Administration* (2)—One lecture; one laboratory. Prerequisites, Ag. Ed. 101, 102, 103.

The work of this course is based upon the construction and analysis of administrative programs for high school departments of vocational agriculture. As a project each student prepares and analyzes in detail an administrative program for a specific school. Investigations and reports. (Cotterman and staff.)

Ag. Ed. 105 f or s. *Practice Teaching* (2)—Prerequisites, Ag. Ed. 101, 102, 103. Cannot be used for credit toward an advanced degree in Agricultural Education.

Under the immediate direction of a critic teacher the student in this course is required to analyze and prepare special units of subject matter, plan lessons, and teach in cooperation with the critic teacher exclusive of observation not less than twenty periods of vocational agriculture. (Worthington and Cotterman.)

Ag. Ed. 106 s. *Rural Life and Education* (3)—Three lectures.

Normal life in rural communities; changing rural communities; ancient and foreign rural communities; evolution of American rural communities; home, school, and church as rural institutions; rural community consciousness; the Grange and other volunteer governmental organizations; juvenile clubs and social life; problems in rural government and political education; contests and fairs as means of reaching educational objectives; extension service programs; work of consolidated high schools, experiment stations, and state universities; commercial concerns as educational agencies; economic and social differences in rural areas; rural cooperation; the message of Denmark; social "rings"; tendencies and opportunities in high grade rural living; investigations and reports. This course is designed especially for persons who expect to be called upon to assist in shaping educational and other community programs for rural people. (Cotterman.)

Ag. Ed. 107 s. *Teaching Farm Shop in Secondary Schools* (1)—One lecture.

Objectives in the teaching of farm shop; contemporary developments; determination of projects; shop management; shop programs; methods of teaching; equipment; materials of instruction; special projects. (Carpenter.)

Ag. Ed. 108 y. *Farm Practicums and Demonstrations* (2)—One laboratory. Cannot be used for credit toward an advanced degree in Agricultural Education.

This course is designed to assist the student in relating the learning acquired in the College of Agriculture with the problems of doing and demonstrating which he faces in the field and classroom as a teacher. It deals with the essential practicums and demonstrations in vocational agriculture in the secondary school. It treats of objectives, organization, equipment, and equipment construction. Laboratory practice in deficiencies required. Special assignments and reports. The course aims particularly to check the agricultural student's training in skills and to introduce him to the conditions under which such training must be given in the patronage areas and laboratories of vocational departments. (Seabold.)

Ag. Ed. 109 s. *Objectives and Methods in Extension Education* (2-3)—Two lectures.

Given under the supervision of the Extension Service, and designed to equip young men to enter the broad field of extension work. Methods of assembling and disseminating the agricultural information available for the practical farmer; administration, organization, supervision, and practical details connected with the work of a county agent, with club work and the duties of an extension specialist. Student will be required to gain experience under the guidance of men experienced in the respective fields. Traveling expenses for this course will be adjusted according to circumstances, the ability of the man, and the service rendered. (Cotterman and Extension Specialists.)

For Graduates

Ag. Ed. 201 f. *Comparative Agricultural Education* (3)—Prerequisite, Ag. Ed. 101.

State systems of instruction in agriculture are examined and evaluated from the standpoint of objectives, the work of teachers, and results accomplished; special papers, investigations, and reports. (Cotterman.)

Ag. Ed. 202 s. *Supervision of Vocational Agriculture* (3)—Prerequisite, Ag. Ed. 101.

Analysis of the work of the supervisor; comparative studies of supervisory programs, policies, and problems; principles of supervision; investigations and reports. (Cotterman.)

Ag. Ed. 203 S. *School and Rural Community Studies* (2)—Summer Session only.

The function of school and rural community studies; typical studies, their purposes and findings; types of surveys; sources of information; planning and preparation of studies; collection, tabulation, and interpretation of data. Essentially a course for those majoring and preparing theses in Agricultural Education.

Ag. Ed. 204 s. *Seminar in Agricultural Education* (3).

Problems in the administration and organization of Agricultural Education—prevocational, secondary, collegiate, and extension; individual problems and papers; current literature. (Cotterman.)

Ag. Ed. 205 y. *Research and Thesis* (6-8).

Students are assigned research work in Agricultural Education under the supervision of the instructor. Work consists of investigation in Agricultural Education. The results are presented in the form of a thesis. (Cotterman.)

*Ed. 105 f. *Educational Sociology* (3).

*Ed 202 y. *College Teaching* (3).

*Ed. 203 s. *Problems in Higher Education* (3).

AGRONOMY

Division of Crops

Professors Metzger, Kemp; Associate Professor Eppley.

Agron. 1 f. *Cereal Crop Production* (3)—Two lectures; one laboratory.

History, distribution, adaptation, culture, improvement, and uses of cereal, forage, pasture, cover, and green manure crops.

Agron. 2 s. *Forage Crop Production* (3)—Two lectures; one laboratory. Continuation of Agron. 1 f.

Agron. 3 s. *Grading Farm Crops* (2)—One lecture; one laboratory. Prerequisites, Agron. 1 and 2.

Market classifications and grades as recommended by the United States Bureau of Markets, and practice in determining the grades.

Agron. 4 f. *Grain and Hay Judging, Identification and Judging of Farm Crops* (1)—One laboratory. Prerequisites, Agron. 1 and 2.

A study of the classification of farm crops; practice in judging the cereals for milling, seeding, and feeding purposes; and practice in judging hay.

Agron. 5 s. *Tobacco Production* (2)—One lecture; one laboratory. Offered only in even years, 1930, 1932, etc.

This course takes up in detail the handling of the crop from preparation of the plant bed through marketing, giving special attention to Maryland types of tobacco.

For Advanced Undergraduates and Graduates

Agron. 103 f. Crop Breeding (2)—One lecture; one laboratory. Prerequisite, Gen. 101.

The principles of breeding as applied to field crops and methods used in crop improvement. (Kemp.)

Agron. 120 s. *Cropping Systems and Methods* (2)—Two lectures. Prerequisites, Agron. 1 and Soils 1.

Principles and factors influencing cropping systems in the United States; study of rotation experiments; theories of cropping methods; and practice in arranging type farming systems. (Metzger.)

Agron. 121 s. *Methods of Crop and Soil Investigations* (2)—One lecture; one laboratory.

A consideration of crop investigation methods at the various experiment stations, and the standardization of such methods. (Metzger.)

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*See courses under Education.

For Graduates

Agron. 201 y. *Crop Breeding* (4-10)—Credits determined by work accomplished.

The content of this course is similar to that of Agron. 103, but will be adapted more to graduate students, and more of a range will be allowed in choice of material to suit special cases. (Kemp.)

Agron. 203 y. *Seminar* (2)—One report period each week.

The seminar is devoted largely to reports by students on current scientific publications dealing with problems in crops and soils.

Agron. 209 y. *Research* (6-8)—Credit determined by work accomplished.

With the approval of the head of the department the student will be allowed to work on any problem in agronomy, or he will be given a list of suggested problems from which he may make a selection. (Staff.)

Division of Soils

Professor Bruce, Associate Professor Thomas, Lecturer Thom.

Soils 1 f and s. *Soils and Fertilizers* (5)—Three lectures; two two-hour laboratory periods. Prerequisites, Geol. 1 f, Chem. 1 y, Chem. 13 s, or registration in 13 s.

A study of the principles involved in soil formation and classification. The influence of physical, chemical, and biological activities on plant growth together with the use of fertilizers in the maintenance of soil fertility.

Soils 2 s. *Soil Management* (3)—Two lectures; one laboratory. Prerequisite, Soils 1.

A study of the soil fertility systems of the United States with special emphasis on the inter-relation of total to available plant food, the balance of nutrients in the soil with reference to various cropping systems, and the economic and national aspect of permanent soil improvement. The practical work includes laboratory and greenhouse practice in soil improvement.

Soils 3 f. *Soil Geography* (3)—Two lectures; one discussion period. A study of the geneology of soils, the principal soil regions of North America, and the classification of soils. Field trips will be made to emphasize certain important phases of the subject.

For Graduate Students

Soils 204 s. *Soil Micro-Biology* (3)—Two lectures; one laboratory. Prerequisite, Bact. 1.

A study of the micro-organisms of the soil in relation to fertility. It includes the study of the bacteria of the soil concerned in the decomposition of organic matter, nitrogen fixation, nitrification, and sulphur oxidation and reduction, and deals also with such organisms as fungi, algae, and protozoa.

The course includes a critical study of the methods used by Experiment Stations in soil investigational work. (Thom.)

Soils 201 y. *Special Problems and Research* (10-12).

Original investigation of problems in soils and fertilizers. (Staff.)

Soils 202 y. *Soil Technology* (7-5 f, 2 s.)—Three lectures; two laboratories first semester; two lectures second semester. Prerequisites, Geology 1, Soils 1, and Chemistry 1.

In the first semester chemical and physico-chemical study of soil problems as encountered in field, greenhouse, and laboratory. In the second semester physical and plant nutritional problems related to the soil. (Thomas.)

ANIMAL HUSBANDRY

Professor Meade; Associate Professor Hunt.

A. H. 1 f. *General Animal Husbandry* (3)—Two lectures; one laboratory.

Place of livestock in the farm organization. General principles underlying efficient livestock management. Brief survey of breeds, types, and market classes of livestock, together with an insight into our meat supply.

A. H. 2 f. *Feeds and Feeding* (3)—Two lectures; one laboratory.

Elements of nutrition; source, characteristics, and adaptability of the various feeds to the several classes of livestock. Feeding standards, the calculation and compounding of rations.

A. H. 3 s. *Principles of Breeding* (3)—Two lectures; one laboratory.

This course covers the practical aspects of animal breeding, including heredity, variation, selection, development, systems of breeding, and pedigree work.

A. H. 4 s. *Swine Production* (3)—Two lectures; one laboratory.

The care, feeding, breeding, management, and judging of swine, and the economics of the swine industry.

A. H. 5 f. *Beef Production* (2)—Two lectures; one laboratory.

The care, feeding, breeding, management of beef herds; fattening; and the economics of the beef industry. (Not given 1932-1933.)

A. H. 6 s. *Horse and Mule Production* (2)—One lecture; one laboratory.

The care, feeding, breeding, and management of horses. Market classes and grades and judging. (Not given 1932-1933.)

A. H. 7 s. *Sheep Production* (3)—Two lectures; one laboratory.

Care, feeding, breeding, and management of the farm flock. Judging of sheep and the grading of wool. (Not given 1932-1933.)

A. H. 8 f. *Meat and Meat Products* (2)—Two laboratories.

The slaughtering of meat animals and the production, preparation, and curing of meat and meat products. (Not given 1932-1933.)

A. H. 9-10 f and s. *Advanced Judging* (2)—One laboratory.

First Semester—The comparative and competitive judging of sheep and swine.

Second Semester—The comparative and competitive judging of horses and beef cattle. Trips to various stock farms throughout the state will be made. Such judging teams as may be chosen to represent the university will be selected from among those taking this course.

A. H. 11 s. *Markets and Marketing* (3)—Two lectures; one laboratory.

History and development, organization and status of the meat, wool, and horse industries. Market classes and grades of livestock. American livestock markets and how they function. (Not given 1932-1933.)

A. H. 12 f and s. *Research and Thesis* (4-6).

Work to be done by assignment and under supervision. Original investigation in problems in animal husbandry, the results of which research are to be presented in the form of a thesis, a copy of which must be filed in the department library.

For Advanced Undergraduates and Graduates

A. H. 101 s. *Nutrition* (3)—Two lectures; one laboratory. Senior year.

A study of digestion, assimilation, metabolism, and protein and energy requirements. Methods of investigation and studies in the utilization of feed and nutrients. (Meade.)

For Graduates

A. H. 201 y. *Special Problems in Animal Husbandry* (4-6)—Problems which relate specifically to the character of work the student is pursuing will be assigned. Credit given will be in proportion to the amount and character of work completed. (Meade.)

A. H. 202 y. *Seminar* (2)—One lecture. Students are required to prepare papers based upon current scientific publications relating to animal husbandry or upon their research for presentation before and discussion by the class. (Staff.)

A. H. 203 y. *Research*—Credit to be determined by the amount and character of work done. With the approval of the head of the department, students will be required to pursue original research in some phase of animal husbandry, carry the same to completion, and report the results in the form of a thesis. (Meade, Hunt.)

ASTRONOMY

Professor T. H. Taliaferro.

Astr. 1 s. *Astronomy* (3)—Three lectures. Elective, but open only to juniors and seniors.

An elementary course in descriptive astronomy.

BACTERIOLOGY AND PATHOLOGY

Professors Pickens, Reed; Associate Professor Black; Mr. Faber; Mr. Bartram; Dr. James, Lecturer in Bacteriology.

Bact. 1 f. or s. *General Bacteriology* (4)—Repeated second semester. Two lectures; two laboratories. Sophomore year.

A brief history of bacteriology; microscopy, bacteria and their relation to nature; morphology, classification; metabolism; bacterial enzymes; application to water, milk, foods, and soils; relation to the industries and to diseases; preparation of culture media; sterilization and disinfection; microscopic and macroscopic examination of bacteria; classification, composition, and uses of stains; isolation, cultivation, and identification of aerobic and anaerobic bacteria.

Bact. 2 s. *Pathogenic Bacteriology* (4)—Two lectures; two laboratories. Sophomore year. Prerequisite, Bact. 1.

Principles of infection and immunity; characteristics of pathogenic microorganisms; isolation and identification of bacteria from pathogenic material; effects of pathogens and their products.

Bact. 3 s. *Household Bacteriology* (3)—One lecture; two laboratories. Junior year. Home Economics students only.

A brief history of bacteriology, laboratory technique; care, preservation, and contamination of foods. Personal, home, and community hygiene.

Bact. 4 s. *Sanitary Bacteriology* (1)—One lecture; senior year, for Engineering students.

Application to water purification and sewage disposal.

For Advanced Undergraduates and Graduates

Bact. 101 f. *Dairy Bacteriology* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 1.

Bacteria in milk, sources and development; milk fermentation; sanitary production; care and sterilization of equipment; care and preservation of milk and cream; pasteurization. Public health requirements. Standard methods of milk analysis; practice in the bacteriological control of milk supplies; occasional inspection trips. (Black.)

Bact. 102 s. *Dairy Bacteriology (Continued)* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 101 f. or consent of instructor in charge.

Relation of bacteria, yeasts, and molds to ice cream, butter, cheese, and other dairy products; sources of contamination. Bacteriological analysis and control; occasional inspection trips. (Black.)

Bact. 103 f. *Hematology* (2)—Two laboratories. Junior year. Bact. 1, desirable.

Procuring blood; estimating the amount of hemoglobin; color index; examination of red cells and leucocytes in fresh and stained preparations; numerical count of erythrocytes and leucocytes; differential count of leucocytes; sources and development of the formed elements of blood; pathological forms and counts. (Reed.)

Bact. 104 f. *Serology* (4)—Two lectures; two laboratories. Junior year. Prerequisite, Bact. 2 s. or consent of instructor in charge.

The theory of agglutinin, precipitin, lysin and complement fixation reactions and their application in the identification of bacteria and diagnosis of disease; factors affecting reactions; principles of immunity and hypersensitiveness; preparation of necessary reagents; general immunologic technic. (Black.)

Bact. 106 f. *Comparative Anatomy and Physiology* (3)—Three lectures. Junior year.

Structure of the animal body; abnormal as contrasted with normal. The interrelationship between the various organs and parts as to structure and function. (Reed.)

Bact. 107 s. *Urinalysis* (2)—Two laboratories. Junior year. Bact. 1, desirable.

Physiologic, pathologic and diagnostic significance; use of clinical methods and interpretation of results. (Reed.)

Bact. 109 f. *Pathological Technic* (3)—One lecture; two laboratories. Junior year. Bact. 1, desirable.

Examination of fresh material; fixation; isolation; decalcification. Sectioning by free hand and freezing methods; celloidin and paraffin imbedding and sectioning. General staining methods. (Reed.)

Bact. 110 s. *Pathological Technic (Continued)* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 109 f. or consent of instructor in charge.

Special methods. (Reed.)

Bact. 112 s. *Sanitary Bacteriology* (3)—One lecture; two laboratories. Junior year. Prerequisite, Bact. 1.

Bacteriological and public health aspects of water supplies, water purification methods, swimming pool sanitation; sewage disposal, industrial wastes; disposal of garbage and other municipal refuse. Practice in standard methods for examination of water and sewage. Differentiation and significance of the Coli aerogenes group; interpretation of bacteriological analyses. (Black.)

Bact. 120 s. *Animal Hygiene* (3)—Three lectures or demonstrations. Senior year.

Care and management of domestic animals, with special reference to maintenance of health and resistance to disease. Prevention and early recognition of disease; general hygiene; sanitation; first aid. (Reed.)

Bact. 121 f. *Bacteriological Problems* (3-5)—Laboratory. Senior year. Prerequisite, Bact. 1.

Subject matter suitable to the needs of the particular student or problems as an introduction to research will be arranged. The research is intended to develop the student's initiative. The problems are to be selected, outlined, and investigated in consultation with and under the supervision of a member of the faculty. Methods of research, library practice, and knowledge of current literature are essential parts of the course. (Black and Pickens.)

Bact. 122 s. *Bacteriological Problems (Continued)* (3-5)—Laboratory. Senior year. Prerequisite, Bact. 1. (Black and Pickens.)

Bact. 123 f. *Thesis* (4)—Laboratory. Senior year. Prerequisites, Bact. 1, and at least one of the advanced courses. May be substituted for Bact. 121 f.

Investigation of given project, results of which are to be presented in the form of a thesis and submitted for credit towards graduation. (Pickens and Black.)

Bact. 124 s. *Thesis (Continued)* (4)—Senior year. Prerequisites, Bact. 1, and at least one of the advanced courses. May be substituted for Bact. 122 s. (Pickens and Black.)

Bact. 125 s. *Public Health* (1)—One lecture. Senior year. Prerequisite, Bact. 1.

A series of weekly lectures on Public Health and its Administration, by the experts of the Maryland State Board of Health. (Pickens, in charge.)

Bact. 130 f. *Seminar* (1)—Senior year. Prerequisites, Bact. 1, and at least one of the advanced courses.

Students will submit reports on current scientific literature or on individual problems in bacteriology, which will be discussed and criticized by members of the class and staff. (Pickens and staff.)

Bact. 131 s. *Seminar (Continued)* (1)—Senior year. Prerequisites, Bact. 1, and at least one of the advanced courses. (Pickens and staff.)

For Graduates

Bact. 201 f. *Research Bacteriology* (2-10)—Laboratory. Prerequisites, Bact. 1, and any other courses needed for the particular project. (Pickens and Black.)

Properly qualified students will be admitted upon approval of the department head, and with his approval the student may select the subject for research. The investigation should be outlined in consultation with and pursued under supervision of a member of the faculty of the department. The results obtained by major students working towards an advanced degree are to be presented in the form of a thesis, a copy of which must be filed with the department. Credit will be determined by the amount and character of the work accomplished.

Bact. 202 s. *Research Bacteriology (Continued)* (2-10)—Laboratory. Prerequisites, Bact. 1, and any other courses needed for the particular project. (Pickens and Black.)

Bact. 203 f. *Research in Genital Diseases of Farm Animals* (2-6)—Prerequisite, degree in Veterinary Medicine from an approved Veterinary college. Laboratory and field work by assignment. (Reed.)

Bact. 204 s. *Research in Genital Diseases of Farm Animals (Continued)* (2-6)—Prerequisite, degree in Veterinary Medicine from an approved Veterinary college. (Reed.)

*Bact. 205 f. *Advanced Food Bacteriology* (3)—Two lectures; one laboratory. Prerequisite, Bact., 10 hours.

Critical review of microorganisms necessary or beneficial to food products. Food spoilage; theories and advanced methods in food preservation. Application of bacteriological control methods to manufacturing operations. (James.)

*Bact. 206 s. *Physiology of Bacteria* (3)—Two lectures; one laboratory. Prerequisites, Bact., 10 hours and Chem. 108 or equivalent.

Chemical composition of bacteria; life cycles; influence of environmental conditions on growth and metabolism; bacterial enzymes; fermentations; protein decomposition; disinfection; bacterial variation; changes occurring in media. (James.)

Bact. 207 f. *Special Topics* (1)—Prerequisite, Bact., 10 hours.

Presentation and discussion of fundamental problems and special subjects. (Black.)

Bact. 208 s. *Special Topics (Continued)* (1)—Prerequisite, Bact., 10 hours. (Black.)

BOTANY

Professors Appleman, Norton, Temple;
Assistant Professors Bamford, Greathouse;
Mr. Parker, Miss Simonds, Mr. Fisher, Mr. Brown.

A. General Botany and Morphology

Bot. 1 f or s. *General Botany* (4)—Two lectures; two laboratories.

General introduction to botany, touching briefly on all phases of the subject and planned to give the fundamental prerequisites for study in the special departments. (Bamford and Assistants.)

Bot. 2 s. *General Botany* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1.

A study of algae, bacteria, fungi, liverworts, mosses, ferns, and seed plants. The development of reproduction, adjustment of plants to land habit of growth, and the attendant changes in vascular and anatomical structures are stressed. Several field trips will be arranged. With Bot. 1, a cultural course intended also as foundational to a career in the plant sciences. (Bamford.)

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* Ten students are required for each of these courses. A special fee is charged for them.

Bot. 3 s. *Local Flora.* (2)—Two laboratories. A study of common plants, both wild and cultivated, and the use of keys and floral manuals in identifying them. Largely field work. (Norton.)

For Advanced Undergraduates and Graduates

Bot. 101 f. *Plant Anatomy* (3)—One lecture; two laboratories. Prerequisite, Bot. 1.

The origin and development of the organs and tissue systems in the vascular plants, with special emphasis on the structures of roots, stems, and leaves. Reports of current literature are required. (Bamford.)

Bot. 102 f. *Mycology* (4)—Two lectures; two laboratories. An introductory study of the morphology, life histories, classification, and economics of the fungi. Methods of cultivating fungi and identification of plant pathogens constitute a large part of the laboratory work. (Norton.)

Bot. 103 f or s. *Plant Taxonomy* (3)—One lecture; two laboratories. (Not offered in 1932-1933.) Classification of the vegetable kingdom, and the principles underlying it; the use of other sciences and all phases of botany as taxonomic foundations; methods of taxonomic research in field, garden, herbarium, and library. Each student to work in a special problem during some of the laboratory time. (Norton.)

Bot. 105 s. *Economic Plants* (2)—One lecture; one laboratory.

The names, taxonomic position, native and commercial geographic distribution, and use of the leading economic plants of the world are studied. By examination of plant products in markets, stores, factories, and gardens, students become familiar with the useful plants both in the natural form and as used by man. (Norton.)

Bot. 106 f. *History and Philosophy of Botany* (1)—One lecture. Discussion of the development of the ideas and knowledge about plants, also a survey of contemporary workers in botanical science. (Norton.)

For Graduates

Bot. 201 s. *Histology and Cytology* (3)—One lecture, 2 laboratories. Prerequisite, Bot. 1.

A study of the technic involved in the preparation of permanent microscopic slides of plant materials. A detailed study of cell contents and cell reproduction, and the methods of illustrating them. The bearing of cytology upon theories of heredity and evolution will be emphasized. (Bamford.)

Bot. 202 s. *Industrial Mycology* (3 or more)—One lecture and two or more laboratories. (Not offered in 1933-1934.) Fungi in relation to canning, dairying, and other manufacturing processes; fermentation, sanitation, home economics, wood preservation, toxicology, soils, insect control, and other economic fields outside plant pathology. Part of the laboratory time to be spent in factories and technical laboratories. (Norton.)

Bot. 204. *Research*—Credit according to work done. (Norton, Bamford.)

B. Plant Pathology

Plt. Path. 1 f. *Diseases of Plants* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1.

An introductory study in the field, in the laboratory, and in the literature, of symptoms, causal organisms and control measures of the diseases of vegetables, field crops, fruits, and ornamental plants. Some option is given in the selection of laboratory materials for detailed study, so that the student may become familiar with the important diseases of the plants in his chosen field. (Temple.)

For Advanced Undergraduates and Graduates

Plt. Path. 101 s. *Advanced Plant Pathology* (4)—Two lectures; two laboratories. Admission only after consultation with the instructor.

This course covers the nature, cause, and control of plant diseases in a much more thorough manner than is possible in the elementary course, and in addition it includes sufficient practice in technic to give the background for research. (Temple.)

Plt. Path. 104 f and s. *Minor Investigations*—Credit according to work done. A laboratory course with an occasional conference. Prerequisite, Plt. Path. 1 f.

In this course the student may enter or withdraw at any time, including the summer months, and receive credit for the work accomplished. The course is intended primarily to give practice in technique so that the student may acquire sufficient skill to undertake fundamental research. Only minor problems or special phases of major problems may be undertaken. Their solution may include a survey of the literature on the problem under investigation and both laboratory and field work. (Temple and Norton.)

For Graduates

Plt. Path. 201 f. *Virus Diseases* (2)—Two lectures.

An advanced course dealing with the mosaic and similar or related diseases of plants, including a study of the current literature on the subject and the working of a problem in the greenhouse. (Temple.)

Plt. Path. 203 f. *Non-Parasitic Diseases* (3)—Two lectures; one laboratory. (Not offered in 1932-1933.)

Effects of maladjustment of plants to their environment; injuries due to climate, soil, gases, dusts and sprays, fertilizers; improper treatment and other detrimental conditions. (Norton.)

Plt. Path. 204 f and s. *Seminar* (1).

Conferences and reports on plant pathological literature and on recent investigations. (Temple.)

Plt. Path. 205 y. *Research*—Credit according to work done. (Norton, Temple.)

C. Plant Physiology

Plt. Phys. 1 f. *Elementary Plant Physiology* (4)—Two lectures; two laboratories. Prerequisite, Bot. 1 f or s.

A summary view of the general physiological activities of plants. The aim in this course is to stress principles rather than factual details. (Greathouse.)

For Advanced Undergraduates and Graduates

Plt. Phys. 101 s. *Plant Ecology* (3)—Two lectures; one laboratory. Prerequisite, Bot. 1 f or s.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated. Much of the work, especially the practical, must be carried on in the field, and for this purpose type regions adjacent to the University are selected. (Fisher.)

For Graduates

Plt. Phys. 201 s. *Plant Biochemistry* (4)—Two lectures; two laboratories. Prerequisites, an elementary knowledge of plant physiology and organic chemistry.

An advanced course on the chemistry of plant life. It deals with materials and processes characteristic of plant life. Primary syntheses and the transformations of materials in plants and plant organs are especially emphasized. (Appleman, Parker.)

Plt. Phys. 202 f. *Plant Biophysics* (3 or 4)—Two lectures; one or two laboratories. Prerequisites, Bot. 1 f or Bot. 1 s and Plt. Phys. 1 f or equivalent. An elementary knowledge of physics or physical chemistry is highly desirable.

An advanced course dealing with the operation of physical forces in life processes and physical methods of research in plant physiology. Practice in recording meteorological data constitutes a part of the course. (Greathouse.)

Plt. Phys. 203 s. *Plant Microchemistry* (2)—One lecture; one laboratory. Prerequisites, Bot. 1 f or s, Chem. 1 y, or equivalents.

The isolation, identification, and localization of organic and inorganic substances found in plant tissues by micro-technical methods. The use of these methods in the study of metabolism in plants is emphasized. (Parker.)

Plt. Phys. 204 s. *Growth and Development* (2)—Not given every year. (Appleman.)

Plt. Phys. 205 f and s. *Seminar* (1).

The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject. (Appleman.)

Plt. Phys. 206 y. *Research*—Credit hours according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken. (Appleman, Greathouse.)

CHEMISTRY

Professors Broughton, Drake, Haring, McDonnell;
Associate Professors White, Wiley;
Assistant Professor Machwart;
Mr. Weiland, Mr. Campbell, Mr. Haskins, Mr. Williams, Mr. Smith,
Mr. Rose, Mr. White, Mr. Jacobsen, Mr. Hatfield, Mr. Bowers,
Mr. Shrader, Mr. Veitch, Miss Koons.

A. General Chemistry

Chem. 1 A y. *General Chemistry* (8)—Two lectures; two laboratories.

A study of the non-metals and metals. One of the main purposes of the course is to develop original work, clear thinking, and keen observation.

Course A is intended for students who have never studied chemistry, or have passed their high school chemistry with a grade of less than *B*.

Chem. 1 B y. *General Chemistry* (8)—Two lectures; two laboratories.

This course covers much the same ground as Chem. 1 A y, but the subject matter is taken up in more detail, with emphasis on chemical theory and important generalization. The laboratory work deals with fundamental principles, the preparation and purification of compounds, and a systematic qualitative analysis of the more common metals and acid radicals.

Course B is intended for students who have passed an approved high school chemistry course, with a grade of not less than *B*.

Chem. 2 f. *Qualitative Analysis* (5)—Three lectures; two laboratories. Prerequisite, Chem. 1 B y.

A study of the reactions of the common metals and the acid radicals, their separation and identification, and the general underlying principles.

For Advanced Undergraduates and Graduates

Chem. 100 S. *Special Topics for Teachers of Elementary Chemistry* (2)—Two lectures. Prerequisite, Chem. 1 y or equivalent.

A study of the content and the method of presentation of a High School Chemistry Course. It is designed chiefly to give a more complete understanding of the subject matter than is usually contained in an elementary course. Some of the recent advances in inorganic chemistry will be discussed. (White.) (Not given in 1932-1933.)

For Graduates

CHEM. 200 y. *Advanced Inorganic Chemistry* (6)—Two lectures; one laboratory. Prerequisite, Chem. 6 y.

A study of the rarer elements is made by comparing their properties with those of the more common elements. The course is based upon the periodic system, the electromotive series, and the electronic structure of matter. The laboratory is devoted to the preparation of pure, inorganic substances, special attention being given to compounds of the rarer elements. (White.)

CHEM. 201 f and s. *Research In Inorganic Chemistry*—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (White.)

B. Analytical Chemistry

CHEM. 4 f or s. *Quantitative Analysis* (4)—Two lectures; two laboratories. Prerequisite, Chem. 1 y.

Quantitative analysis for pre-medical students with special reference to volumetric methods.

CHEM. 5 y. *Determinative Mineralogy and Assaying* (4)—One lecture; one laboratory. Prerequisite, Chem. 1 y.

The more important minerals are identified by their characteristic physical and chemical properties. Assays of gold, silver, copper, and lead are made.

CHEM. 6 y. *Quantitative Analysis* (8)—Two lectures; three laboratory periods. Prerequisite, Chem. 2 f.

The principal operations of gravimetric analysis. Standardization of weights and apparatus used in chemical analysis. The principal operations of volumetric analysis. Study of indicators, typical volumetric and colormetric methods. The calculations of volumetric and gravimetric analysis are emphasized, as well as calculations relating to common ion effect. Required of all students whose major is chemistry.

For Advanced Undergraduates and Graduates

CHEM. 101 y. *Advanced Quantitative Analysis* (10)—Two lectures; three laboratories. Prerequisite, Chem. 6 y, or its equivalent.

A broad survey of the field of inorganic quantitative analysis. In the first semester mineral analysis will be given. Included in this will be analysis of silicates, carbonates, etc. In the second semester the analysis of steel and iron will be taken up. However, the student will be given wide latitude as to the type of quantitative analysis he wishes to pursue during the second semester. (Wiley.)

CHEM. 103 y. *Advanced Industrial Analysis* (10)—Two lectures; three laboratories.

This course includes the analysis of alloys of industrial application. The interpretation of chemical analysis and correlation of chemical composition and physical properties. A limited amount of work will be done with the microscope. (Wiley.)

For Graduates

CHEM. 202 f and s. *Research in Quantitative Analysis*—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (Wiley.)

C. Organic Chemistry

CHEM. 8 A f or s. *Elementary Organic Chemistry* (3)—Three lectures. Prerequisite, Chem. 1 y.

This course includes an elementary study of the fundamentals of organic chemistry, and is designed to meet the needs of students specializing in chemistry, and pre-medical students.

CHEM. 8 B f or s. *Elementary Organic Laboratory* (2)—A course designated to familiarize the student with the fundamental methods of the organic laboratory. This course with Chem. 8 A f or s will satisfy the pre-medical requirements in organic chemistry.

For Advanced Undergraduates and Graduates

CHEM. 116 y. *Advanced Organic Chemistry* (8 or 10)—Two lectures; two or three laboratory periods. Prerequisite, Chem. 8 f or s or its equivalent. Course 116 y may be taken without the laboratory work. Graduate students may take the lectures (4 credits) only in this course and elect also Chem. 210 y.

This course is devoted to a more advanced study of the compounds of carbon than is undertaken in Chem. 8 f or s. The three credit laboratory course is required of graduate students specializing in chemistry. Seniors and juniors may take the two credit laboratory course. The laboratory work includes quantitative determinations of halogen, nitrogen, carbon, and hydrogen in organic substances, and also preparation work more difficult than that encountered in the elementary course. The laboratory work of the second half year will be devoted to organic qualitative analysis. Required of students specializing in chemistry. (Drake.)

For Graduates

CHEM. 203 f and s. *Special Topics in Organic Chemistry* (2)—A lecture course which will be given any half-year when there is sufficient demand. The course will be devoted to an advanced study of topics which are too specialized to be considered in Chem. 116 y. Topics that may be covered are dyes, drugs, carbohydrates, plant pigments, etc. The subject-matter will be varied to suit best the needs of the particular group enrolled. (Drake.)

Chem. 204 f and s. *Special Topics in Organic Chemistry* (2)—A continuation of Chem. 203 f and s. Either this course or course 203 will be given when there is sufficient demand. (Drake.)

Chem. 205 f and s. *Organic Preparations* (4)—A laboratory course, devoted to the synthesis of various organic compounds. This course is designed to fit the needs of those students whose laboratory experience has been insufficient for research in organic chemistry. (Drake.)

Chem. 206 f and s. *Organic Microanalysis* (4)—A laboratory study of the methods of Pregl for the quantitative determination of halogen, nitrogen, carbon, hydrogen, methoxyl, etc., in very small quantities of material. The course is open only to properly qualified graduate students, and the consent of the instructor is necessary before enrollment. (Drake.)

Chem. 207 f and s. *Organic Qualitative Analysis* (4 or 6 credits)—Laboratory work devoted to the identification of unknown organic compounds and mixtures.

Chem. 210 y. *Advanced Organic Laboratory* (4 or 6 credits)—Students electing this course may take 4 lecture credits in Chem. 116 y.

Chem. 211 f and s. *Research in Organic Chemistry*—Open to students working for the higher degrees. Prerequisite, a bachelor's degree in chemistry or its equivalent. (Drake.)

D. Physical Chemistry

Chem. 10 y. *Elementary Physical Chemistry* (6)—Two lectures; one laboratory period. Prerequisites, Chem. 1 y; Physics 1 y; Math. 5 y.

This course, designed particularly for those unable to pursue the subject further, reviews the more theoretical points of inorganic chemistry from an advanced standpoint and lays a good foundation for more advanced work in physical chemistry.

For Advanced Undergraduates and Graduates

Chem. 102 y. *Physical Chemistry* (10)—Three lectures; two laboratory periods. Prerequisites, Chem. 6 y; Physics 2 y; Math. 5 y. One term may be taken for graduate credit with or without laboratory work. Graduate students may take lectures (6 credits) only in this course and elect also Chem. 219 f and s. With the consent of the instructor, graduate students may enter in the second semester.

This course aims to furnish the student with a thorough background in the laws and theories of chemistry. (The gas laws, kinetic theory, liquids, solutions, elementary thermodynamics, thermochemistry, equilibrium, chemical kinetics, etc., will be discussed.) (Haring.)

For Graduates

Note: Chem. 102 f and s. or its equivalent is prerequisite for all advanced courses in physical chemistry.

Chem. 212 f and s. *Colloid Chemistry* (8) or (4)—Two lectures; two laboratory periods; or two lectures only.

This is a thorough course in the chemistry of matter associated with surface energy. First semester, theory; second semester, practical applications. (Haring.) (Not given in 1932-1933.)

Chem. 213 f. *Phase Rule* (2)—Two lectures.

A systematic study of heterogeneous equilibria. One, two, and three component systems will be considered with practical applications of each. (Haring.)

Chem. 214 s. *Structure of Matter* (2)—Two lectures.

Subjects considered will be radioactivity, isotopes, the Bohr and Lewis-Langmuir theories of atomic structure, and allied topics. (Haring.)

Chem. 215 f. *Catalysis* (2)—Two lectures.

This course consists of lectures on the theory and applications of catalysis. (Haring.)

Chem. 216 s. *Theory of Solutions* (2)—Two lectures.

A detailed study will be made of the modern theory of ideal solutions, of the theory of electrolytic dissociation and of the recent developments of the latter. (Haring.) (Not given in 1932-1933.)

Chem 217 f and s. *Electrochemistry* (8) or (4)—Two lectures; two laboratory periods; or two lectures only.

A study of the principles and some of the practical applications of electrochemistry. First semester, theory; second semester, practical applications. (Haring.)

Chem. 218 y. *Chemical Thermodynamics* (4)—Two lectures.

A study of the methods of approaching chemical problems through the laws of energy. (Haring.)

Chem. 219 f and s. (4 or 6 credits). Two laboratory periods and one conference. Students taking this course may elect 6 credits of lectures in Chem. 102 y.

Chem. 220 f and s. *Research in Physical Chemistry*—Open to students working for the higher degrees. Prerequisites, a bachelor's degree in chemistry or its equivalent, and consent of the instructor. (Haring.)

E. Agricultural Chemistry

Chem. 12 f. *Elements of Organic Chemistry* (4)—Three lectures; one laboratory. Prerequisite, Chem. 1 y.

The chemistry of carbon and its compounds. This course is particularly designed for students in Agriculture and Home Economics.

Chem. 13 s. *Agricultural Chemical Analysis* (3)—One lecture; two laboratories. Prerequisite, Chem. 1 y.

An introductory course in the analysis of agricultural products with special reference to the analysis of feeding stuffs, soils, fertilizers, and insecticides.

Chem. 14 s. *Chemistry of Textiles* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f.

A study of the principal textile fibres, their chemical and mechanical structure. Chemical methods are given for identifying the various fibres and for a study of dyes and mordants.

For Advanced Undergraduates and Graduates

Chem. 106 f or s. *Dairy Chemistry* (4)—One lecture; three laboratories. Prerequisite, Chem. 12 f.

Lectures and assigned reading on the constituents of dairy products. This course is designed to give the student a working knowledge and laboratory practice in dairy chemistry and analysis. Practice is given in examining dairy products for confirmation under the food laws, detection of watering, detection of preservatives and added colors, and the detection of adulterants. Students showing sufficient progress may take the second semester's work, and elect to isolate and make complete analysis of the fat or protein of milk. (McDonnell.)

Chem. 108 s. *General Physiological Chemistry* (4)—Two lectures; two laboratories. Prerequisite, Chem. 12 f or its equivalent.

A study of the chemistry of the fats, carbohydrates, proteins, and their fate in digestion and metabolism. (Broughton.)

Chem. 115 f or s. *Organic Analysis* (4)—One lecture; three laboratories. Prerequisites, Chem. 12 f and 13 s.

This course gives a connected introductory training in organic analysis, especially as applied to plant and animal substances and their manufactured products. The greater part of the course is devoted to quantitative methods for food materials and related substances. Standard works and the publications of the Association of the Official Agricultural Chemists are used freely as references. (Broughton.)

For Graduates

Chem. 221 f or s. *Tissue Analysis* (3)—Three laboratories. Prerequisite, Chem. 12 f or its equivalent.

A discussion and the application of the analytical methods used in determining the inorganic and organic constituents of plant and animal tissue. (Broughton.)

Chem. 223 f. *Physiological Chemistry* (5)—Three lectures; two laboratories. Prerequisite, Organic Chemistry 12 f or its equivalent.

Lectures and laboratories on the study of the constitution and reactions of proteins, fats, carbohydrates, and allied compounds of biological importance. (Broughton.)

Chem. 224 f or s. *Special Problems* (4 to 8)—A total of eight credit hours may be obtained in this course by continuing the course for two semesters. Laboratory, library, and conference work amounting to ten hours each week. Prerequisites, Chem. 223 f and consent of instructor.

This course consists of studies of special methods, such as the separation of the fatty acids from a selected fat, the preparation of certain carbohydrates or amino acids, and the determination of the distribution of nitrogen in a protein. The students will choose, with the advice of the instructor, the particular problem to be studied. (Broughton.)

Chem. 227 f and s. *Research*—Agricultural chemical problems will be assigned to graduate students who wish to gain an advance degree. (Broughton.)

F. Industrial Chemistry

For Advanced Undergraduates and Graduates

Chem. 110 y. *Industrial Chemistry* (6)—Three lectures. Prerequisites, Chem. 6 y and 8 y.

A study of the principal chemical industries; plant inspection, trips and reports; the preparation of a report on some chemical industry. (Machwart.)

Chem. 111 f. *Engineering Chemistry* (2)—Two lectures.

A study of the chemistry of engineering materials. (Machwart.)

Chem. 112 f and s. *Technical Methods* (3)—One lecture; two laboratories. Prerequisite, Chem. 6 y.

An examination of water from an industrial viewpoint. (Machwart.)

Chem. 113 f. *Engineering Chemistry* (3)—Two lectures; one laboratory.

This course, designed for mechanical engineers, includes a study of water, lubricants, fuels and their combustion. Problems typical of engineering work. (Machwart.)

Chem. 114 y. *Industrial Stoichimetry* (4)—Two lectures.

A study of the stoichimetric relations existing in industry. Problems typical of industry. (Machwart.)

Chem. 117 y. *Industrial Laboratory* (4)—Two laboratories. Prerequisite, consent of instructor.

Experiments typical of industrial operations. Examination of materials. (Machwart.)

For Graduates

Chem. 222 y. *Unit Operations* (6)—Three lectures. Prerequisite, consent of instructor.

A theoretical discussion of evaporation, distillation, filtration, etc. Problems. (Machwart.)

Chem. 225 s. *Gas Analysis* (3)—One lecture; two laboratories. Prerequisite, consent of instructor.

Quantitative determination of common gases. Flue gas and water gas analysis, including calorific determinations of the latter. Problems. (Machwart.)

Chem. 228 f and s. *Research in Industrial Chemistry.*

The investigation of special problems and the preparation of a thesis towards an advanced degree. (Machwart.)

G. Chemical Seminar

CHEM. 226 f and s (2)—Required of *all* graduate students in chemistry. The students are required to prepare reports of papers in the current literature. These are discussed in connection with the recent advances in the subject. (The Chemistry Staff.)

DAIRY HUSBANDRY

PROFESSOR MEADE; ASSOCIATE PROFESSORS INGHAM, MUNKWITZ.

D. H. 1 s. *Farm Dairying* (3)—Two lectures; one laboratory.

Types and breeds of dairy cattle, the production and handling of milk on the farm, use of the Babcock test starters, cottage cheese, and farm buttermaking.

D. H. 2 f. *Dairy Production* (3)—Two lectures; one laboratory.

Breeds of dairy cattle, their characteristics and adaptability. Methods of herd management, feeding and breeding operations, dairy herd improvement, and other factors concerned in the efficient and economical production of milk. Advanced registry requirements and dairy cattle judging.

D. H. 3 s. *Advanced Dairy Cattle Judging* (1)—One laboratory.

Comparative judging of dairy cattle. Trips to various leading dairy farms will be made. Such dairy cattle judging teams as may be chosen to represent the University will be selected from among those taking this course.

D. H. 4 f and s. *Dairy Manufacturing* (3)—One lecture; two laboratories.

Manufacture of butter, cheese, and ice-cream, and the preparation of culture buttermilk. Study of cream separation, pasteurization, and processing of milk and cream. Refrigeration. The second semester work will be devoted largely to the study of ice-cream, and must be preceded by the work of the first semester. (Not given in 1932-1933.)

D. H. 5 f. *Market Milk* (4)—Three lectures; one laboratory.

The course is so planned as to cover the commercial and economic phases of market milk, relating more particularly to cost of production and distribution, processing, milk plant construction and operation, sanitation, and merchandizing. Dairy farms and commercial dairy plants will be visited and their plans of construction, arrangement of equipment, and method of operation carefully studied.

D. H. 6 s. *Marketing and Grading of Dairy Products* (2)—One lecture; one laboratory.

Dairy marketing from the standpoint of producer, dealer, and consumer; market grades and the judging of dairy products.

D. H. 7 s. *Dairy Plant Technique* (2)—One lecture; one laboratory. Prerequisites, D. H. 2; Bact. 103; Chem. 106.

This course is designed to give students practice in the application of dairy technology. Commercial dairy laboratory tests will be made and their economic value as they relate to the dairy industry studied.

D. H. 8 f and s. *Research and Thesis* (4-6)—This work to be done by assignment and under supervision. Opportunity will be given to study and summarize the data on some special problem or to carry on original investigations in problems in Dairy Husbandry. The results of such study or problems must be presented in the form of a thesis, a copy of which shall be filed in the department library.

For Advanced Undergraduates and Graduates

D. H. 101 s. *Advanced Breed Study* (2)—One lecture; one laboratory. Breed Association rules and regulations, important families and individuals, pedigree studies. Work largely by assignment. (Ingham.)

D. H. 102 s. *Advanced Dairy Manufacturing* (3)—Hours to be arranged as to lecture and laboratory. Prerequisite, D. H. 4.

Plant and laboratory management, storage problems. Study of costs of production, accounting systems, purchase of equipment and supplies, market conditions, relation of the manufacturer to the shipper and dealer.

In this course the student will be required to act as helper and foreman, and will be given an opportunity to participate in the general management of the dairy plant. Visits will be made to nearby dairies and ice-cream establishments. (Munkwitz.)

For Graduates

D. H. 201 y. *Special Problems in Dairying* (4-6)—Special problems which relate specifically to the work the student is pursuing will be assigned. Credit will be given in accordance with the amount and character of work done. (Meade.)

D H. 202 y. *Seminar* (2)—Students are required to prepare papers based upon current scientific publications relating to dairying or upon their research work for presentation before and discussion by the class. (Staff.)

D. H. 203 y. *Research.* Credit to be determined by the amount and quality of work done. The student will be required to pursue with the approval of the head of the department an original investigation in some phase of dairy husbandry, carry the same to completion, and report the results in the form of a thesis. (Meade, Munkwitz, Ingham.)

ECONOMICS AND SOCIOLOGY

PROFESSOR BROWN; ASSISTANT PROFESSORS JOHNSON, WEDEBERG, DANIELS;
MR. BELLMAN, MR. GARRETH.

A. Economics

SOC. SCI. 1 y. *Introduction to the Social Sciences* (6)—One lecture; two discussions. Open to freshmen and sophomores only.

This course serves as an orientation to advanced work in the social sciences. In the first semester the basis, nature, and evolution of society and social institutions are studied. During the second semester major problems of modern citizenship are analysed in terms of knowledge contributed by economics, history, political science, and sociology.

ECON. 1 f. *Economic Geography and Industry* (3)—Three lectures.

A study of the economic and political factors which are responsible for the location of industries, and which influence the production, distribution, and exchange of commodities throughout the world.

ECON. 2 s. *History of World Commerce* (3)—Three lectures.

Commercial development throughout the three major periods of history; viz., Ancient, Medieval, and Modern. Special emphasis is laid upon important changes brought about by the World War.

ECON. 3 y. *Principles of Economics* (6)—Three lectures. Prerequisite, sophomore standing.

A study of the general principles of economics—production, exchange, distribution, and consumption of wealth. The study is based upon a recent text, lectures, collateral readings, and student exercises.

ECON. 5 f or s. *Fundamentals of Economics* (3)—Three lectures. Required of students in the College of Engineering and Agriculture.

A study of the general principles underlying economic activity. Not open to students having credit in Economics 3 y.

For Advanced Undergraduates and Graduates

ECON. 101 f. *Money and Credit* (2)—Two lectures. Prerequisite, Econ. 3 y or consent of the instructor.

A study of the origin, nature, and functions of money, monetary systems, credit and credit instruments, prices, interest rates, and exchanges. (Brown.)

ECON. 102 s. *Banking* (2)—Two lectures. Prerequisite, Econ. 101 f.

Principles and practice of banking in relation to business. Special emphasis upon the Federal Reserve System . (Brown.)

ECON. 103 f. *Corporation Finance* (2)—Two lectures. Prerequisite, Econ. 3 y.

Principles of financing, the corporation and its status before the law, basis of capitalization, sources of capital funds, sinking funds, distribution of surplus, causes of failures, reorganizations, and receiverships. (Brown.)

ECON. 104 s. *Investments* (3)—Three lectures. Prerequisite, Econ. 3 y and senior standing.

Principles of investment, analyzing reports, price determination, taxation of securities, corporation bonds, civil obligations, real estate securities, and miscellaneous investments. Lectures, library assignments, and chart studies. (Brown.)

ECON. 105 f. *Business Organization and Operation* (2)—Two lectures. Prerequisite, Econ. 3 y.

A study of the growth of large business organizations. Types of organization are studied from the viewpoints of legal status, relative efficiency, and social effects. (Wedeberg.)

ECON. 107 f. *Business Law* (3)—Three lectures. Prerequisite, junior standing.

Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property, and sales. (Johnson.)

ECON. 108 s. *Business Law* (3)—Three lectures. Prerequisite, Econ. 107 f.

A continuation of Econ. 107 f. (Johnson.)

ECON. 109 y. *Introductory Accounting* (6)—Two lectures; one laboratory.

This course has two aims; namely, to give the prospective business man an idea of accounting as a means of control, and to serve as a basic course for advanced and specialized accounting. Methods and procedure of accounting in the single proprietorship, partnership, and corporation are studied. (Wedeberg.)

ECON. 110 y. *Principles of Accounting* (6)—Three lectures. Prerequisite, Econ. 109 y.

A continuation of Econ. 109 y with emphasis upon the theory of accounting. Special phases of corporation accounting are studied. The introduction of accounting systems for manufacturing, commercial, and financial institutions. (Wedeberg.)

ECON. 111 f. *Public Finance* (2)—Two lectures. Prerequisite, Econ. 3 y.

The nature of public expenditures, sources of revenue, taxation, and budgeting. Special emphasis upon the practical, social, and economic problems involved. (Johnson.)

ECON. 112 s. *Land Transportation* (3)—Three lectures. Prerequisite, Econ. 3 y or Econ. 5 f or s. Not open to students who receive credit in A. E. 101 s.

The development of inland means of transportation in the United States. This course is devoted largely to a survey of railway transportation. Some study is given to other transportation agencies. (Daniels.)

ECON. 113 f. *Public Utilities* (2)—Two lectures. Prerequisite, Econ. 3 y.

The development of public utilities in the United States, economic and legal characteristics, regulatory agencies, valuation, rate of return, and public ownership. (Johnson.)

ECON. 114 s. *Insurance* (3)—Three lectures. Prerequisite, Econ. 3 y.

A survey of the major principles and practices of life and property insurance with special reference to its relationship to our social and economic life. (Johnson.)

ECON. 115 y. *History of Economic Theory* (4)—Two lectures. Prerequisite, Econ. 3 y and senior standing.

History of economic doctrines and theories from the eighteenth century to the modern period. (Johnson.)

ECON. 116 s. *Principles of Foreign Trade* (3)—Three lectures. Prerequisite, Econ. 3 y, Econ. 1 f and Econ. 2 s or their equivalent.

The basic principles of import and export trade, as influenced by the differences in methods of conducting domestic and foreign commerce. (Daniels.)

ECON. 117 f. *Labor Problems* (3)—Three lectures. Prerequisite, Econ. 3 y or consent of the instructor.

The background of the labor problem, wage determination, unemployment and remedies for it, labor organizations, agencies for promoting industrial peace, the economic, social and political programs of labor at the present time. (Brown.) (Not given in 1932-1933.)

ECON. 119 f. *Advanced Economics* (2)—Two lectures. Prerequisites, Econ. 3 y and senior standing.

An analysis of the theories of contemporary economists. Special attention is given to the problems of value and distribution. (Brown.)

ECON. 120 s. *Applied Economics* (2)—Two lectures. Prerequisite, Econ. 119 f or consent of instructor.

Current economic problems are studied from the viewpoint of the economist. Lectures and class discussions based on assigned readings. (Brown.)

ECON. 121 s. *Cost Accounting* (2)—Two lectures. Prerequisites, Econ. 109 y and consent of instructor.

Process cost accounting; specific order cost accounting; expense control; application of accounting theory; preparation of analytical statements. (Wedeberg.)

For Graduates

ECON. 201 y. *Thesis* (4-6)—Graduate standing. (Members of the staff.)

ECON. 203 y. *Seminar* (4)—Prerequisite, consent of instructor.

Designed to meet the needs of graduate students of the Department of Economics. Discussion of major problems in the field of economic theory. Presentation of reports based upon original investigations. (Staff.)

B. Sociology

SOC. 1 f. *Principles of Sociology* (3)—Three lectures. Prerequisite, sophomore standing.

An analysis of community and social institutions; processes and products of human interaction; the relation between society and the individual; social change.

SOC. 2 s. *Cultural Anthropology* (2)—Two lectures. Prerequisite, sophomore standing.

An analysis of several primitive cultures and of modern society for the purpose of ascertaining the nature of culture, and culture processes. Museum exhibits will be correlated with class work.

For Advanced Undergraduates and Graduates

SOC. 101 f. *Rural Sociology* (2)—Two lectures.

Historical approach to rural life; structure and functions of rural communities; rural institutions and their problems; psychology of rural life; statistical analysis of rural population; relation of rural life to the major social processes; the reshaping of rural life. (Bellman.)

SOC. 102 s. *Urban Sociology* (2)—Two lectures.

Historical survey of cities; statistical analysis of city groups; the nature and significance of the urbanization process; the social structure and functions of the city; urban personalities and groups; social change and problems due to the impact of the urban environment. (Bellman.)

SOC. 107 y. *Social Pathology and Social Work* (4)—Two lectures. Prerequisite, Soc. 1 f.

Causative factors and social complications in individual and group pathological conditions; types of social work and institutional treatment; the theory and technique of social case work; visits to major social agencies. (Bellman.) (Not given in 1932-1933.)

SOC. 115 f. *History of Social Theory* (3)—Three lectures. Prerequisites, Soc. 1 f and consent of instructor.

A survey of man's attempt to understand and explain the origin, nature, and laws of human society; the emergence and establishment of sociology as a social science. (Bellman.)

SOC. 116 s. *Contemporary Sociological Theories and Methods* (3)—Three lectures. Prerequisite, Soc. 115 f.

A survey of the most important contemporary sociological theories in combination with a general analysis of research methods used by the sociologist. (Bellman.)

(For other courses see Education, Agricultural Education and Rural Life.)

EDUCATION

PROFESSORS SMALL, COTTERMAN, SPROWLS, MACKERT; ASSOCIATE PROFESSOR LONG; ASSISTANT PROFESSOR BRECHBILL; MISS SMITH; MISS PHILLIPS.

GUID. 1 y. *College Aims* (2)—One lecture. Required of freshmen in the College of Education; elective for other freshmen.

This course is designed to assist students in adjusting themselves to the demands and problems of college and professional and intellectual life, and to serve as a foundation for guidance in the selection of college work during subsequent years. Among other activities, it includes a consideration of the functions of the college, institutional backgrounds, student programs and problems, case studies, investigations, and reports. (Cotterman.)

A. History and Principles

Ed. 2 f. *Public Education in the United States* (2)—Required of sophomores in Education.

A study of the theory and practice of public education in the United States as it has been developed and is now organized. The emphasis will be on elementary education and secondary education, with proportionate treatment of vocational education and relations of elementary and secondary education to higher education.

Ed. 3 s. *Educational Hygiene* (2)—Required of sophomores in Education. Seniors not admitted.

Elements of general, individual, and group hygiene; causes of health and disease; knowledge and ideals of health; health as an objective of education.

For Advanced Undergraduates and Graduates

Ed. 102 s. *Technic of Teaching* (3)—Required of juniors in Education. Prerequisite, Ed. 101 f. Not for graduate credit.

Educational objectives and outcomes of teaching; types of lesson; problem, project, and unit; measuring results and marking; socialization and directed study; classroom management; observation. (Long.)

Ed. 103 s. *Principles of Secondary Education* (3)—Required of all seniors in Education. Prerequisites, Ed. 101 f, Ed. 102 s, and full senior standing.

Evolution of the high school; European secondary education; articulation of the high school with the elementary school, college, and technical school, and with the community and the home; the junior high school; high school pupils; programs of study and the reconstruction of curricula; teaching staff; student activities. (Small, Long.)

Ed. 104 f. *History of Education* (3)—Senior Elective.

History of the evolution of educational theory, institutions, and practices. Emphasis is upon the modern period. (Small.)

Ed. 105 f. *Educational Sociology* (3)—Senior Elective.

The sociological foundations of education; the major educational objectives; the function of educational institutions; the program of studies; objectives of the school subjects; group needs and demands; methods of determining educational objectives. (Cotterman.)

Ed. 110 f. *The Junior High School* (3)—Senior Elective.

This course considers the functions of the Junior High School in the American public school system. Its development, present organization, curricula and relation to upper and lower grades will be emphasized. (Long.)

Ed. 111 f. *Lives of Scientists* (2).

A study of the major achievements and interesting incidents in the lives of the pioneers of science. Though designed especially to provide enrichment material for the use of high school teachers, the course is of general cultural value. (Brechbill.)

*Ag. Ed. 106 s. *Rural Life and Education.*

For Graduates

Ed. 201 y. *Seminar in Education* (6)—(The course is organized in semester units.)

Problems in educational organization, administration, and curriculum. Study of current literature; individual problems. (Small.)

Ed. 202 f. *College Teaching* (3)—One seminar period.

Analysis of the work of the college teacher; objectives; nature of subject matter; nature of learning; characteristics of college students; methods of college teachers; measuring results; extra-course duties; problems; investigations; reports. (Cotterman.)

Ed. 203 s. *Problems in Higher Education* (3)—One double period a week. Lectures, surveys, and individual reports. Prerequisite, Ed. 202 f.

American collegiate education; status of the college teacher; collegiate education in foreign countries; demands upon institutions of higher learning; tendencies in the reorganization of collegiate education; curriculum problems; equipment for teaching. (Cotterman.)

Ed. 204 s. *The Senior High School* (3)—This course will consider the principal's duties in relation to organization for operation, administration, and supervision of instruction, and community relationships. (Long.)

B. Educational Psychology

For Advanced Undergraduates and Graduates

Ed. 101 f. *Educational Psychology* (3)—Open to juniors and seniors. Required of all juniors in Education. Not for graduate credit.

General characteristics and use of original tendencies; principles of mental development; the laws and methods of learning, forgetting, transfer of training; experiments in rate of improvement; permanence and efficiency; causes and nature of individual differences; principles underlying mental tests; principles which should govern school practices. (Sprowls.)

Ed. 106 s. *Advanced Educational Psychology* (3)—Prerequisites, Ed. 101 f and Ed. 102 s. The latter may be taken concurrently with Ed. 106 s.

Principles of genetic psychology; nature and development of the human organism; development and control of instincts. Methods of testing intelligence; group and individual differences and their relations to educational practice. Methods of measuring rate of learning; study of typical learning experiments. (Sprowls.)

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* *See Agricultural Education.*

Ed. 107 f. *Educational Measurements* (3)—Prerequisites, Ed. 101 f and Ed. 102 s.

A study of typical educational problems involving educational scales and standard tests. Nature of tests, methods of use, analysis of results, and practical applications in educational procedure. Emphasis will be upon tests for high school subjects. (Sprowls.)

Ed. 108 s. *Mental Hygiene* (3)—Prerequisite, Ed. 101 f or Psych. 1 f or s or equivalent.

Normal tendencies in the development of character and personality. Solving problems of adjustment to school and society; obsessions, fears, compulsions, conflicts, inhibitions, and compensations. Methods of personality analysis. (Sprowls.)

For Graduates

Ed. 206 y. *Seminar in Educational Psychology* (6).

For candidates for advanced degrees who are working on special problems. Hours to be arranged. (Sprowls.)

C. Methods in High School Subjects

Ed. 120 f. *English in the High School* (4)—Prerequisites, Ed. 101 f, Ed. 102 s.

Objectives in English in the different types of high schools; selection and organization of subject matter in terms of modern practice and group needs; evaluation of texts and references; bibliographies. Methods of procedure and types of lessons; the use of auxiliary materials; lesson plans; measuring results. (Smith.)

Ed. 121 f or s. *Supervised Teaching of English* (3)—Observation and supervised teaching. Minimum of 20 teaching periods required. (Smith.)

Ed. 122 f. *The Social Studies in the High School* (4)—Prerequisites, Ed. 101 f, Ed. 102 s.

Selection and organization of subject matter in relation to the objectives and present trend in the Social Studies; texts and bibliographies. Methods of procedure and types of lessons; the use of auxiliary materials; lesson plans; measuring results. (Long.)

Ed. 123 f or s. *Supervised Teaching of the Social Studies* (3)—Observation and supervised teaching. Minimum of 20 teaching periods required. (Long.)

Ed. 124 f. *Modern Language in the High School* (4)—Prerequisites, Ed. 101 f, Ed. 102 s.

Objectives of modern language teaching in the high school; selection and organization of subject matter in relation to modern practice and group needs; evaluation of texts and references; bibliographies. Methods of procedure and types of lessons; lesson plans; special devices; measuring results.

Ed. 125 f or s. *Supervised Teaching of Modern Language* (3)—Observation and supervised teaching. Minimum of 20 teaching periods required.

Ed. 126 f. *Science in the High School* (4)—Prerequisites, Ed. 101 f, Ed. 102 s.

Objectives of science teaching, their relation to the general objectives of secondary education; application of the principles of psychology and of teaching to the science class room situation; selection and organization of subject matter; history, trends and status; textbooks, reference works and laboratory equipment. Technic of class room and laboratory; measurement, standardized tests; professional organizations and literature; observation and criticism. (Brechbill.)

Ed. 127 f or s. *Supervised Teaching of Science* (3)—Observation and supervised teaching. Minimum of 20 teaching periods required. (Brechbill.)

Ed. 128 f. *Mathematics in the High School* (4)—Prerequisites, Ed. 101 f, Ed. 102 s.

Objectives; the place of mathematics in secondary education; content and construction of courses; recent trends; textbooks and equipment. Methods of instruction; measurement and standardized tests; professional organizations and literature; observation and criticism. (Brechbill.)

Ed. 129 f or s. *Supervised Teaching of Mathematics* (3)—Observation and supervised teaching. Minimum of 20 teaching periods required. (Brechbill.)

D. Physical Education for Women

Ed. 140 y. *Physical Education Activities for High School Girls* (4)—Required of juniors with Physical Education major or minor.

This course includes the activities which may be used both for class work and for extra curricular programs. The emphasis is upon the teaching side, and each student will be given an opportunity to teach in her own class. (Phillips.)

Ed. 142 y. *Physical Education in the High School* (*Girls*) (6)—Special methods and supervised teaching. Open to seniors desiring to teach Physical Education. Prerequisites, Ed. 101 f, Ed. 102 s, Ed. 140 y.

This course includes a brief survey of modern Physical Education in Europe and the United States, and methods and practice of teaching Physical Education in the high schools. The needs of high school girls are studied, and types of programs appropriate to high school girls will be worked out. Objectives, selection of subject matter, organization of materials, lesson plans, observation, and class teaching. (Phillips.)

E. Physical Education for Men

Ed. 141 y. *Physical Education in the High School* (Boys).

This course includes observation and supervised teaching of physical education in the high school; aim and objective of physical education;

lesson planning; problem cases; methods of handling classes, meets, pageants, and the like; physical and medical examinations; care of equipment; records; teaching and grading. Minimum of twenty teaching periods required. (Mackert.)

ENGINEERING

PROFESSORS JOHNSON, CREESE, STEINBERG, NESBIT; ASSOCIATE PROFESSORS SKELTON, HODGINS; ASSISTANT PROFESSORS HOSHALL, BAILEY; DR. RESSER, MR. PYLE, MR. HENNICK.

Civil Engineering

C. E. 101 f. *Elements of Railroads* (3)—Two lectures; one laboratory. Prerequisite, Surv. 2 y. Required of juniors in Civil Engineering.

The theory and practice of railroad surveys, alignment and earthwork. Preliminary steps toward complete plans for a short railroad. (Skelton.)

C. E. 102 s. *Elements, Design of Structures* (5)—Three lectures; two laboratories. Prerequisite, Mech. 2 y. Required of juniors in Civil Engineering.

The theory and elementary design of masonry and steel structures, including plain and reinforced concrete. Analysis of stresses in beams, columns, retaining walls, dams, roof trusses, plate girders, and bridges. (Steinberg.)

C. E. 103 s. *Elements of Steel Design* (2)—One lecture; one laboratory. Required of juniors in Mechanical Engineering.

Design of steel beams and columns. Analysis of roof trusses, plate girders, and traveling cranes. Particular application to industrial buildings. (Skelton.)

C. E. 104 y. *Buildings, Masonry and Steel* (8)—Three lectures; one laboratory. Prerequisite, C. E. 102 s. Required of seniors in Civil Engineering.

A continuation of C. E. 102 s with particular application to the design of buildings both of masonry and of steel. (Skelton.)

C. E. 105 y. *Bridges, Masonry and Steel* (8)—Three lectures; one laboratory. Prerequisite, C. E. 102 s. Required of seniors in Civil Engineering.

A continuation of C. E. 102 s with particular application to the design of bridges both of masonry and of steel. (Steinberg.)

C. E. 106 f. *Highways* (4)—Three lectures; one laboratory. Prerequisites, Surv. 101 f, Mech. 2 y. Required of seniors in Civil Engineering.

Location, construction, and maintenance of roads and pavements. Highway contracts and specifications, estimates and costs, highway work, highway legislation, highway economics, and highway transportation. The course will include, in addition to lecture and classroom work, field inspection trips. (Johnson and Steinberg.)

C. E. 107 y. *Sanitation* (6)—Three lectures. Prerequisite, Mech. 2 y. Required of seniors in Civil Engineering.

Methods of estimating consumption and designing water supply and sewerage systems. (Pyle.)

C. E. 108 s. *Thesis* (3)—Required of seniors in Civil Engineering.

In this course the student selects, with faculty approval, a subject in Civil Engineering design or research. He makes such field or laboratory studies as may be needed. Weekly reports of progress are required, and frequent conferences are held with the faculty members to whom the student is assigned for advice. A written report is required to complete the work. (Johnson.)

Drafting

DR. 1 y. *Engineering Drafting* (2)—One laboratory. Required of all freshmen in Engineering.

Freehand Drawing—Lettering, exercises in sketching of technical illustrations and objects, proportion and comparative measurements.

Mechanical Drawing—Use of instruments, projections and working drawings, drawing to scale in pencil and in ink, topographic drawing, tracing and blue printing.

DR. 2 y. *Descriptive Geometry* (4)—Two laboratory periods. Prerequisite, Dr. 1 y. Required of all sophomores in Engineering.

Orthographic projection as applied to the solution of problems relating to the point, line, and plane, intersection of planes with solids, and development. Generation of surfaces; planes, tangent and normal to surfaces; intersection and development of curved surfaces. Shades, shadows, and perspective.

Electrical Engineering

E. E. 101 f. *Industrial Application of Electricity* (3)—Three lectures. Prerequisites, Phys. 2 y, Math. 6 y.

The principles and practice of the application of direct and alternating current generators and motors to specific industrial processes. (Creese.)

E. E. 102 y. *Direct Currents* (10)—Three lectures; two laboratories. Prerequisites, Phys. 2 y and Math. 6 y.

Principles of design, construction, and operation of direct current generators and motors and direct current control apparatus. The construction, characteristics, and operation of primary and secondary batteries and the auxiliary control equipment. Study of elementary alternating current circuits.

Experiments on the calibration of laboratory instruments, the manipulation of precision instruments, battery characteristics, and the operation and characteristics of direct current generators and motors. (Hodgins.)

E. E. 103 y. *Electrical Machine Design* (2)—One laboratory. Prerequisites, Phys. 2 y, Math. 6 y, and to take concurrently with E. E. 102 y.

Materials of construction and design of the electric and magnetic circuits of direct current generators and motors. (Hodgins.)

E. E. 104 y. *Alternating Currents* (10)—Three lectures; two laboratories. Prerequisite, E. E. 102 y.

Analytical and graphic solution of problems on single phase and polyphase circuits; construction, characteristics, and operation of all types of alternating current generators and motors; switchboard appliances, the use of the oscillograph; alternating current power measurements. (Creese.)

E. E. 105 y. *Electrical Machine Design* (3)—One laboratory first semester; two laboratories second semester. Prerequisites, E. E. 103 y, M. E. 101 f, and to take concurrently E. E. 104 y.

Materials of construction and design of the electric and magnetic circuits of alternating current generators,motors, and transformers. (Hodgins.)

E. E. 106 y. *Electric Railways and Power Transmission* (7)—Three lectures first semester; four lectures second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Traffic studies, train schedules, motor characteristics, and the development of speed-distance and power-time curves, systems of control, motors and other railway equipment, electrification system for electric railways, including generating apparatus, transmission lines, substations and distribution of electrical energy for car operation; electrification of steam roads and application of signal systems, problems in operation from the selection of proper car equipment to the substation apparatus.

Survey of the electrical equipment required in central stations and substations, transmission of electric power, practical problems illustrating the principles of installation and operation of power machinery. (Hodgins.)

E. E. 107 y. *Telephones and Telegraphs* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

History and principles of magneto telephone and variable resistance transmitter, carbon transmitter, telephone receiver, induction coils, and calling equipment. These components of the telephone then are studied as a complete unit in the local battery and common battery telephones. Magneto and common battery switchboards used in telephone exchanges, automatic telephones, and the operation of simple, duplex, and quadruplex telegraphy. Solution of analytical problems on telephone transmission.

In the laboratory the units are assembled and operated. (Hodgins.)

E. E. 108 y. *Radio Telegraphy and Telephony* (7)—Two lectures and one laboratory first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Principles of radio telegraphy and telephony, design, construction, and operation of transmitting and receiving apparatus, and special study of the use of the vacuum tube for short wave transmitting and receiving. Experiments include radio frequency measurements and the testing of various types of receiving circuits. (Creese.)

E. E. 109 y. *Illumination* (7)—Three lectures first semester; three lectures and one laboratory second semester. Prerequisite, E. E. 102 y, and to take concurrently E. E. 104 y.

Series systems of distribution, methods of street lighting, calculation of voltage drop, regulation, weights of wire and methods of feeding parallel systems, principles and units used in illumination problems, lamps and reflectors, candle-power measurements of lamps, measurement of illumination intensities and calculations for illumination of laboratories and classrooms. (Creese.)

General Engineering Subjects

ENGR. 1 y. *Prime Movers* (4)—Two lectures. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Civil Engineering.

Salient features of the operation of steam, gas, hydraulic and electric prime movers and pumps. Comparison of types of each, methods of assembling or setting up in place for operation. Service tests. (Bailey.)

ENGR. 2 y. *Prime Movers* (4)—Two lectures. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Electrical Engineering.

This course is similar in content to Engr. 1 y, but with greater emphasis placed on details preparatory to work in Thermodynamic problems in the senior year. (Bailey.)

ENGR. 3 y. *Engineering Geology* (2)—One laboratory. Lectures and field trips. Required of all juniors in Engineering.

Study of common rocks and minerals, geologic processes and conditions affecting problems of water supply, bridge, railroad, and highway construction, dams and reservoirs, tunnels, canals, river and harbor improvements, irrigation works, and rock excavation. (Resser.)

ENGR. 101 s. *Engineering Economy* (1)—Required of all seniors in Engineering.

A study of the economic aspects of an engineering decision; including segregation of costs and cost analysis, technic of estimating costs, and comparisons of ultimate economy. (Steinberg.)

ENGR. 102 s. *Engineering Jurisprudence* (1)—One lecture. Required of all seniors in Engineering.

A study of the fundamental principles of law relating to business and to engineering; including contracts, agency, sales, negotiable instruments, corporations, and common carriers. These principles are then applied to the analysis of general and technical clauses in engineering contracts and specifications. (Steinberg.)

Mechanics

MECH. 1 y. *Engineering Mechanics* (7)—Three lectures and one laboratory first semester. Two lectures and one laboratory second semester. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Electrical and Mechanical Engineering.

Applied Mechanics—The analytical study of statics dealing with the composition and resolution of forces, moments and couples, machines and the laws of friction, dynamics, work, energy, and the strength of materials.

Graphic Statics—The graphic solution of problems in mechanics, center of gravity, moments of inertia and determination of stresses in frame structures.

Elements of Hydraulics—Flow of water in pipes, through orifices and in open channels. Determination of the co-efficient of discharge, velocity, and contraction in pipes and orifices. (Bailey.)

MECH. 2 y. *Engineering Mechanics* (9)—Four lectures and one laboratory first semester. Three lectures and one laboratory second semester. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Civil Engineering.

This course is similar in content to Mech. 1 y, but with greater emphasis placed on strength of material and hydraulics. (Skelton.)

MECH. 3 s. *Materials of Engineering* (2)—One lecture; one laboratory. To be taken concurrently with Engineering Mechanics. Required of all juniors in Engineering.

The composition, manufacture, and properties of the principal materials used in engineering and of the conditions that influence their physical characteristics. The interpretation of specifications and of standard tests. Laboratory work in the testing of steel, wrought iron, timber, brick, cement, and concrete. (Johnson, Pyle, and Hoshall.)

MECH. 101 f. *Thermodynamics* (3) — Three lectures. Prerequisites, Phys. 2 y, Engr. 1 y. Required of seniors in Electrical Engineering (Bailey.)

MECH. 102 y. *Thermodynamics* (6) — Three lectures. Prerequisites, Physics, 2 y, Engr. 1 y. Required of seniors in Mechanical Engineering.

Thermodynamics as applied to properties of gases, cycles of heat, engines using gases. Properties of vapors. Entropy. The internal combustion engine. The steam turbine. Flow of fluids, and the application of thermodynamics to compressed air and refrigerating machinery. (Nesbit.)

Mechanical Engineering

M. E. 101 f. *Elements of Machine Design* (1)—One laboratory. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Electrical Engineering.

Empirical design of machine parts. (Bailey.)

M. E. 102 y. *Kinematics and Machine Design* (8)—Two lectures; two laboratories. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Mechanical Engineering.

The application of the principles involved in determining the properties and forms of machine parts. The design of bolts, screws, shafting, and gears. The theory and practice of the kinematics of machinery, as applied to ropes, belts, chains, gears and gear teeth, wheels in trains, epicyclic trains, cams, linkwood, parallel motions. Miscellaneous mechanisms and aggregate combinations. (Hoshall.)

M. E. 103 f. *Pressure Vessels* (1)—One lecture. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Mechanical Engineering.

Calculations on pressure vessels as to material used and strength required. (Bailey.)

M. E. 104 s. *Heat Power Engineering* (2)—Two lectures. Prerequisites, Math. 6 y and Phys. 2 y. Required of juniors in Mechanical Engineering.

Introductory course in the principles of heat power in engineering, and the applications and conversion of heat into power. (Nesbit.)

M. E. 105 f. *Heating and Ventilation* (2)—Two lectures. Prerequisites, M. E. 103 f and Mech. 1 y. Required of seniors in Mechanical Engineering.

Problems involving the methods in use in various systems, as to size and capacity necessary for any required installation. (Nesbit.)

M. E. 106 f. *Design of Pumping Machinery* (2)—One lecture, one laboratory. Prerequisites, M. E. 102 y and Mech. 1 y. Required of seniors in Mechanical Engineering.

Design of double acting steam pumps, centrifugal pumps, vacuum pumps, and water works pumps. (Nesbit.)

M. E. 107 y. *Design of Prime Movers* (6)—Two lectures; one laboratory. Prerequisites, M. E. 102 y, M. E. 104 s, Mech. 1 y.

Required of seniors in mechanical engineering. The design and proportioning of parts of essential prime movers for power plants. (Nesbit.)

M. E. 108 s. *Design of Power Plants* (3)—Two lectures, one laboratory. Prerequisites, M. E. 104 s, M. E. 105 f, M. E. 107 y. Required of seniors in Mechanical Engineering.

The design of complete power plants, including the layout and cost of building and installation of equipment. (Nesbit.)

M. E. 109 y. *Mechanical Laboratory* (2)—One laboratory. Prerequisites, Engr. 1 y; Mech. 1 y. Required of seniors in Mechanical Engineering.

Calibration of instruments, gauges, indicator springs, planimeters, steam, gas, and water meters.

Indicated and brake horsepower of steam and internal combustion engines, setting of plain valves, Corliss valves. Tests for economy and capacity of boilers, engines, turbines. Pumps and other prime movers. Feed water heaters, condensers; B. T. U. analysis of solid, gaseous, and liquid fuels and other complete power plant tests. (Nesbit.)

M. E. 110 s. *Engineering Finance* (2)—Two lectures. Required of seniors in Mechanical Engineering.

Financial problems of the engineer. Cost segregation and cost analysis. Basis of price and rates. Fixed charges and operating costs. Replacement cost. Depreciation. Maintenance. Taxes and insurance. Unit cost determination. Determination of size of system for best financial efficiency. (Nesbit.)

Shop

Shop 1 y. *Shop and Forge Practice* (2)—One laboratory. Required of all freshmen in Engineering.

The use and care of wood-working tools, exercises in sawing, planing, turning, and laying out work from blueprints. Patternmaking with moulding and casting demonstrations to give understanding of general principles. Forging of iron and steel, welding and making of carbon steel tools. Demonstrations in oxy-acetylene welding of steel, cast iron, brass, and aluminum, also brazing of malleable iron and steel.

Shop 2 f. *Machine Shop Practice* (1)—One laboratory period. Prerequisite, Shop 1 y. Required of sophomores in Mechanical and Electrical Engineering.

Exercises in bench work, turning, planing, drilling, and pipe threading.

Shop 3 s. *Machine Shop Practice* (2)—One lecture; one laboratory. Prerequisite, Shop 2 f. Required of sophomores in Mechanical and Electrical Engineering.

Advanced practice with standard machine shop machines. Exercises in thread cutting, surface grinding, fluting, and cutting of spur and twisted gears.

Calculations of machine shop problems involving lathe and milling machines. Problems relating to methods of manufacture of machine parts by use of jigs and time-saving fixtures.

Shop 4 f. *Foundry Practice* (1)—One laboratory. Prerequisite, Shop 1 y. Required of juniors in Mechanical Engineering.

Casting in brass, aluminum, and cast iron. Core making. The operation of furnace and cupola. Lectures on metals, fuels, and a foundry equipment.

Surveying

Surv. 1 f. *Surveying* (1)—Lecture and laboratory work. Prerequisite, Math. 6 y. Required of sophomores in Mechanical and Electrical Engineering.

Theory of and practice in the use of the Tape, Compass, Transit, and Level. General surveying methods, map reading, traversing, theory of stadia.

Surv. 2 y. *Plane Surveying* (4)—One lecture; one laboratory. Required of sophomores in Civil Engineering.

Land surveying and map making for topography and planning. Practice in stadia. Computations of coordinates. Plotting of control and detail. Establishing of line and grade for construction purposes. Laying out simple curves. Estimation of earthwork.

Surv. 101 f. *Advanced Surveying* (3)—One lecture; two laboratories. Prerequisite, Surv. 2 y. Required of juniors in Civil Engineering.

Adjustment of Instruments. Determination of Azimuth by Stellar and Solar observations. Triangulation, Precise leveling, Trigonometric Leveling and Geodetic Surveying, together with the computations and adjustments necessary. (Pyle.)

ENGLISH LANGUAGE AND LITERATURE

Professor House; Associate Professors Harman, Hale;
Assistant Professor Lemon; Dr. Macbeth, Mr. Murphy,
Mr. Cooley, Miss Kemp.

Eng. 1 y. *Composition and Rhetoric* (6)—Three lectures. Freshman year. Prerequisite, three units of high school English. Required of all four-year students.

Study of the principles of style, syntax, spelling, punctuation. Detailed examination of standard essays, one drama, and one novel. Written themes and book reviews, exercises in grammatical analysis and in paragraph writing.

Eng. 2 y. *Elements of Literature* (6)—Three lectures. Prerequisite, three units of high school English.

Examination of the principles of literary form. Study and interpretation of selected classics.

Eng. 3 f. *Advanced Composition and Rhetoric* (2)—Two lectures. Prerequisite, Eng. 1 y. Eng. 3 f and 4 s are required courses for all students whose major or minor is English.

Study and analysis of the best modern essays as a basis of class papers. Also original themes on assigned topics.

Eng. 4 s. *Advanced Composition and Rhetoric* (2)—Two lectures. Continuation of Eng. 3 f. Prerequisite, Eng. 3 f.

Eng. 5 f. *Expository Writing* (2)—Two lectures. Prerequisite, Eng. 1 y.

Study of the principles of exposition. Analysis and interpretation of material bearing upon scientific matter. Themes, papers, and reports.

Eng. 6 s. *Expository Writing* (2)—Two lectures.

Continuation of Eng. 5 f. Prerequisite, Eng. 5 f.

Eng. 7 f. *History of English Literature* (3)—Three lectures. Prerequisite, Eng. 1 y. Required of all students whose major or minor is English.

A general survey, with extensive reading and class papers.

Eng. 8 s. *History of English Literature* (3)—Three lectures.

Continuation of Eng. 7 f. Prerequisite, Eng. 7 f.

Eng. 9 f. *American Literature* (3)—Three lectures. Prerequisite, Eng. 1 y.

Lectures on the development of American literary types. Class papers. (Not given in 1932-1933.)

Eng. 10 s. *American Literature* (3)—Three lectures.

Continuation of Eng. 9 f. Prerequisite, Eng. 9 f. (Not given in 1932-1933.)

Eng. 11 f. *Modern Poets* (3)—Three lectures. Prerequisite, Eng. 1 y.

English and American poets of the latter part of the Nineteenth and of the Twentieth Century.

Eng. 12 s. *Modern Poets* (3)—Three lectures.

Continuation of Eng. 11 f. Prerequisite, Eng. 1 y.

Eng. 13 f. *The Drama* (3)—Three lectures. Prerequisite, Eng. 1 y.

A study of representative plays in the development of English and American drama. Reports and term themes.

Eng. 14 s. *The Drama* (3)—Three lectures. Continuation of Eng. 13 f. Prerequisite, Eng. 13 f.

Eng. 15 f. *Shakespeare* (3)—Three lectures. Prerequisite, Eng. 1 y.

An intensive study of selected plays.

Eng. 16 s. *Shakespeare* (3)—Three lectures.

Continuation of Eng. 15 f. Prerequisite, Eng. 1 y.

Eng. 17 f. *Business English* (2)—Two lectures. Prerequisite, Eng. 1 y.

This course develops the best methods of effective expression, both oral and written, used in business relations.

Eng. 18 s. *Business English* (2)—Two lectures.

Continuation of Eng. 17 f. Prerequisite, Eng. 17 f.

Eng. 19 s. *Introduction to Narrative Literature* (2)—Two lectures. Open to freshmen. Great stories of the world, in prose and verse.

For Advanced Undergraduates and Graduates

Eng. 105 s. *Poetry of the Romantic Age* (3)—Three lectures. Prerequisite, Eng. 7 f and 8 s or Comp. Lit. 105, first semester. A study of the Romantic movement in England as illustrated in the works of Shelley, Keats, Byron, Wordsworth, Coleridge. (Hale.)

(This course is identical with the second semester of Comp. Lit. 105 y.)

Eng. 115 f. *Literature of the Eighteenth Century* (2)—Two lectures. Prerequisite, Eng. 7 and 8. Readings in the period dominated by Defoe, Swift, Addison, Steele, and Pope. (Macbeth.)

Eng. 116 s. *Literature of the Eighteenth Century* (2)—Two lectures. Prerequisite, Eng. 7 and 8. A continuation of Eng. 115 f. Dr. Johnson and his Circle; the Rise of Romanticism; the Letter Writers. (Macbeth.)

Eng. 119 y. *Anglo-Saxon* (6)—Three lectures. Some knowledge of Latin and German is desirable, as a preparation for this course. Required of all students whose major is English.

A study of Anglo-Saxon (Old English) grammar and literature. Lectures on the principles of comparative philology and phonetics. (House.)

Eng. 122 f. *The Novel* (2)—Two lectures.

Lectures on the principles of narrative structure and style. Class reviews of selected novels, chiefly from English and American sources. (House.)

Eng. 123 s. *The Novel* (2)—Two lectures.

Continuation of Eng. 122 f. (House.)

Eng. 124 f. *English and American Essays* (2)—Two lectures.

A study of the philosophical, critical, and familiar essays of England and America. Bacon, Lamb, Macaulay, Emerson, Chesterton, and others. (House.)

Eng. 126 f. *Victorian Poets* (2)—Two lectures.

Studies in the poetry of Tennyson, Browning, Arnold, Swinburne, and others. (House.)

Eng. 127 s. *Victorian Poets* (2)—Two lectures.

Continuation of Eng. 126 f. (House.)

Eng. 129 f. *College Grammar* (3)—Three lectures. Required of all students whose major is English, and strongly recommended for all whose minor is English.

Studies in the descriptive grammar of modern English, with some account of the history of forms. (Harman.)

Eng. 130 f. *The Old Testament as Literature* (2)—Two lectures. For seniors and graduate students.

A study of the sources, development, and literary types. (Hale.)

For Graduates

Eng. 201. *Thesis*—Credit proportioned to the amount of work and ends accomplished. (Staff.)

Original research and the preparation of dissertations looking towards advanced degrees.

Eng. 202 y. *Beowulf* (4)—Two lectures. Prerequisite, Eng. 119 y.

Critical study of grammar and versification, with some account of the legendary lore. (Harman.) Alternate with Eng. 203 f and 204 s.

ENG. 203 f. *Middle English* (2)—Two lectures. Prerequisite, Eng. 119 y.

A study of excerpts of the Middle English period, with reference to etymology and syntax. (House.)

ENG. 204 s. *Gothic* (2)—Two lectures. Prerequisite, Eng. 119 y.

A study of the forms and syntax, with readings from the Ulfilas Bible. Correlation of Gothic speech sounds with those of Old English. (House.) Eng. 203 f and 204 s alternate with Eng. 202 y.

ENG. 205 s. *Browning's Dramas* (2)—Two lectures. *Luria, The Return of the Druses, Pippa Passes, Colombe's Birthday, A Blot in the 'Scutcheon.* (House.)

ENG. 206 f. *Victorian Prose* (2)—Two lectures. Works of Carlyle, Arnold, Mill, Ruskin, and others. (Hale.)

ENG. 207 y. *Medieval Romance in England* (4)—Two lectures. Prerequisite, Eng. 7 f. Lectures and readings in the cyclical and non-cyclical romances in Medieval England and their sources, including translations from the Old French. (Hale.)

ENG. 208 y. *The Major Poets of the Fourteenth Century* (4)—Two lectures. Prerequisite, Eng. 7 f. Lectures and assigned readings in the works of Langland, Gower, Chaucer, and other poets of the fourteenth century. (Hale.) (Not given in 1932-1933.)

ENTOMOLOGY

PROFESSOR CORY; ASSISTANT PROFESSOR KNIGHT;
LECTURER SNODGRASS; MR. ABRAMS; DR. DITMAN; MR. ANDERSON.

ENT. 1 f or s. *Introductory Entomology* (3)—Two lectures; one laboratory. Prerequisite, Zool. 1 f or s.

The relations of insects to the daily life and activities of the student. General principles of structural and systematic entomology. Field work and the preparation of a collection of insects.

ENT. 2 y. *Insect Morphology and Taxonomy* (6)—A two-semester course. Two laboratories. Credit not given for second semester alone.

Studies of the anatomy, physiology, and taxonomy of insects. A fundamental course given in preparation for most of the advanced courses. Lectures given at opportune times during laboratory periods. Prerequisite, Ent. 1 f or s.

ENT. 3 f or s. *Insect Biology* (3)—Two lectures; one laboratory. Prerequisite, Ent. 1 f or s.

A continuation of general entomological problems begun in the first course, with particular emphasis on the adaptations, ecology, interrelations, and behavior of insects.

ENT. 4 f or s. *Special Problems*—Prerequisite—consult department.

The intensive investigation of some entomological subject. A report of the results is submitted as part of the requirement for graduation.

ENT. 5 s. *Insecticides and Their Application* (2)—One lecture; one laboratory. Prerequisite, Ent. 1 f or s.

The principles of insecticides, their chemistry, preparation, and application; construction, care, and use of spray and dusting machinery; fumigation; methods and apparatus in mechanical control.

ENT. 6 f and s. *Apiculture* (3)—Two lectures; one laboratory. Prerequisites, Zoology 1 f or s, and Ent. 1f or s. Credit not given for second semester alone.

A study of the life history, yearly cycle, behavior, and activities of the honeybee. The value of honeybees as pollenizers of economic plants and as producers of honey and wax. Theory and practice of apiary management. Designed to be of value to the student of agriculture, horticulture, entomology, and zoology who wishes to keep bees or to understand the biology of the honeybee.

ENT. 7 y. *Entomological Technic and Scientific Delineation* (4). Prerequisite, Ent. 1 f or s.

Collecting, rearing, preserving, and mounting of insects. The preparation of exhibits, materials for instruction, entomological records. Methods of illustrating, including drawing, photography, lantern slide making, and projection. Useful for prospective teachers of biology as well as for the entomological student.

For Advanced Undergraduates and Graduates

ENT. 101 y. *Economic Entomology* (6)—Three lectures.

An intensive study of the problems of applied entomology, including life history, ecology, behavior, distribution, parasitism, and control. (Cory.)

ENT. 102 y. *Economic Entomology* (4)—Two laboratories.

Expansion of Ent. 101 y to include laboratory and field work in economic entomology. (Cory.) (Not offered in 1932-1933.)

ENT. 103 y. *Seminar* (2)—Time to be arranged.

Presentation of original work, book reviews, and abstracts of the more important literature. (Cory, Knight.)

ENT. 104 y. *Insect Pests of Special Groups* (6). Prerequisite, Ent. 1 f or s.

A study of the principal insects of one or more of the following groups, founded upon food preferences and habitat. The course is intended to give the general student a comprehensive view of the insects that are of importance in his major field of interest and detailed information to the student specializing in entomology.

Insect Pests of 1. Fruit. 2. Vegetables. 3. Flowers, both in the open and under glass. 4. Ornamentals and Shade Trees. 5. Forests. 6. Field Crops. 7. Stored Products. 8. Live Stock. 9. The Household. (Cory.) (Not offered in 1932-1933.)

ENT. 105 f. *Medical Entomology* (3)—Three lectures. Prerequisite, Entomology 1 f or s, and consent of instructor.

The relation of insects to diseases of man, directly and as carriers of pathogenic organisms. Control of pests of man. The fundamentals of parasitology. (Knight.) (Not offered in 1932-1933.)

For Graduate Students

ENT. 201. *Advanced Entomology* (2).

Studies of minor problems in morphology, taxonomy, and applied entomology, with particular reference to preparation for individual research. (Cory.)

ENT. 202 y. *Research in Entomology* (6-10).

Advanced students having sufficient preparation, with the approval of the head of the department, may undertake supervised research in morphology, taxonomy, or biology and control of insects. Frequently the student may be allowed to work on Station or State Horticultural Department projects. The student's work may form a part of the final report on the project and be published in bulletin form. A dissertation, suitable for publication, must be submitted at the close of the studies as a part of the requirements for an advanced degree. (Cory.)

ENT. 203. *Insect Morphology* (2-4).

Insect Anatomy with special relation to function. Given particularly in preparation for work in physiology and other advanced studies. Two lectures, and laboratory work by special arrangement, to suit individual needs. (Snodgrass.)

ENT. 204 y. *Economic Entomology* (6)—Three lectures. Studies of the principles underlying applied entomology, and the most significant advances in all phases of entomology (Cory.)

Note: Course 203 begins November 15 and closes March 15, and is taught at 4:30 P. M. in order to accommodate field-workers.

FARM FORESTRY

PROFESSOR BESLEY.

FOR. 1 s. *Farm Forestry* (3)—Two lectures; one laboratory. Alternate year course. Junior and senior years. Prerequisite, Bot. 101 f.

A study of the principles and practices involved in managing woodlands on the farm. The course covers briefly the identification of trees; forest protection; management, measurement, and utilization of forest crops; nursery practice; and tree planting. The work is conducted by means of lectures and practice in the woods.

FARM MANAGEMENT

PROFESSOR W. T. L. TALIAFERRO.

F. M. 1 s. *Farm Accounting* (3)—Two lectures; one laboratory. Open to juniors and seniors.

A concise practical course in the keeping of farm accounts and in determining the cost of farm production.

F. M. 2 f. *Farm Management* (4)—Four lectures.

The business of farming from the standpoint of the individual farmer. This course aims to connect the principles and practice which the student has acquired in the several technical courses and to apply them to the development of a successful farm business.

See also Agricultural Economics, page 170.

FARM MECHANICS

PROFESSOR CARPENTER.

F. MECH. 101 f. *Farm Machinery* (3)—Two lectures; one laboratory.

A study of the design and adjustments of modern horse- and tractor-drawn machinery. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

F. MECH. 102 s. *Gas Engines, Tractors, and Automobiles* (3)—Two lectures; one laboratory.

A study of the design, operation, and repair of the various types of internal combustion engines used in farm practice.

F. MECH. 104 f. *Farm Shop Work* (1)—One laboratory.

A study of practical farm shop exercises offered primarily for prospective teachers of vocational agriculture.

F. MECH. 105 f. *Farm Buildings* (2)—Two lectures.

A study of all types of farm structures; also of farm heating, lighting, water supply, and sanitation systems.

F. MECH. 107 s. *Farm Drainage* (2)—One lecture; one laboratory.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of laterals, calculation of grades, and methods of construction. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

GENETICS AND STATISTICS

PROFESSOR KEMP.

GEN. 101 f. *Genetics* (3)—Three lectures.

A general course designed to give an insight into the principles of genetics or of heredity, and also to prepare students for later courses in the breeding of animals or of crops.

GEN. 102 s. *Advanced Genetics* (2)—Two lectures; Prerequisite, Gen. 101 f. Alternate year course.

A consideration of chromosome irregularities and other mutations, interspecies crosses, genetic equilibrium, and the results of artificial attempts to modify germplasm.

GEN. 111 f. *Statistics* (2)—Two lectures.

A study of the collection, analysis, interpretation, and presentation of statistics. The course includes a study of expressions of type, variability, and correlation, together with the making of diagrams, graphs, charts, and maps.

Gen. 112 s. *Advanced Statistics* (2)—Two lectures. Prerequisite, Gen. 111 f. or its equivalent.

A study of the theory of error, measures of relationship, multiple and partial correlation, predictive formulas, curve fitting.

Gen. 114 s. *Elements of Statistics* (3)—Three lectures. Required of students in Business Administration.

A study of the fundamental principles used in statistical investigation.

Gen. 201 y. *Plant Breeding*—Credit according to work done.

Gen. 209 y. *Research*—Credit according to work done.

GEOLOGY

Professor Bruce.

Geol. 1 f. *Geology* (3)—Two lectures; one laboratory.

A textbook, lecture, and laboratory course, dealing with the principles of geology and their application to agriculture. While this course is designed primarily for agriculture students in preparation for technical courses, it may also be taken as part of a liberal education.

GREEK

Professor Spence.

Greek 1 y. *Elementary Greek* (8)—Four lectures.

Drill and practice in the fundamentals of Greek grammar and the acquisition of a vocabulary, with translation of simple prose.

Greek 2 y. *Greek Grammar, Composition, and Translation of Selected Prose Work* (8)—Four lectures. Prerequisite, Greek 1 y or two entrance units in Greek.

HISTORY AND POLITICAL SCIENCE

Professors Crothers, Spence; Assistant Professor Jaeger;
Mr. Schulz, Mr. Stoner.

A. History

H. 1 y. *Modern European History* (6)—Three lectures and assignments.

The object of the course is to acquaint students with the chief events in European History during the modern period. The lectures are so arranged as to present a comparative and constructive view of the most important events during the period covered.

H. 2 y. *American History* (6)—Three lectures and assignments. Open to sophomores.

An introductory course in American History from the discovery of the New World to the present time.

H. 3 y. *History of England and Greater Britain* (6)—Three lectures and assignments. Open to freshmen.

A survey course of English History.

H. 4 s. *History of Maryland* (2)—Two lectures. Not open to juniors and seniors.

A study of the Colony of Maryland and its development into statehood.

H. 5 f. *Ancient Civilization* (3)—Three lectures. Required of students taking a major or minor in Classical Languages.

Treatment of ancient times, including Geography, Mythology, and Philosophy.

For Advanced Undergraduates and Graduates

H. 101 f. *American Colonial History* (3)—Three lectures and assignments. Prerequisite, H. 2 y.

A study of the political, economic, and social development of the American people from the discovery of America through the formation of the Constitution. (Crothers.)

H. 102 s. *Recent American History* (3)—Three lectures. Prerequisite, H. 2 y.

The history of national development from the close of the reconstruction period to the present time. (Crothers.)

H. 103 y. *American History 1790-1865* (4)—Two lectures. Prerequisite, H. 2 y.

The history of national development to the reconstruction period. (Crothers.) (Not given 1932-1933.)

H. 104 y. *World History Since 1914* (6)—Three lectures.

A study of the principal nations of the world since the outbreak of the World War. (Jaeger.) (Not given 1932-1933.)

H. 105 y. *Diplomatic History of Europe in the Nineteenth and Twentieth Centuries* (6)—Three lectures.

A study of the European nations, stressing their political problems and their political activities. (Jaeger.)

H. 106 y. *American Diplomacy* (4)—Two lectures.

A study of American foreign policy. (Crothers.)

H. 107 f. *Social and Economic History of United States* (2)—Two lectures.

An advanced course giving a synthesis of American life from 1607 to 1828. (Crothers.)

H. 108 s. *Social and Economic History of United States* (2)—Two lectures.

This course is similar to H. 107 f and covers the period from 1828 to the present time. (Crothers.)

For Graduates

H. 201 y. *Seminar in American History* (4). (Crothers.)

H. 202 y. *Seminar in European History* (4). (Jaeger.)

B. Political Science

Soc. Sci. 1 y. *Introduction to the Social Sciences* (6). (For description of course, see Economics and Sociology, Page 195.)

Pol. Sci. 2 f. *Government of the United States* (3)—Three lectures. Open to sophomores.

A study of the Government of the United States. Evolution of the Federal Constitution; function of the Federal Government.

Pol. Sci. 3 s. *Political Parties in the United States* (3)—Prerequisite, Pol. Sci. 2 f.

The development and growth of American political parties. Party organization and machinery.

For Advanced Undergraduates and Graduates

Pol. Sci. 101 f. *International Law* (3). Three lectures and recitations. Case method.

A study of the sources, nature, and development of international law as found in the decisions of courts and tribunals, both municipal and international. (Jaeger.)

Pol. Sci. 102 s. *International Relations* (3)—Three lectures and conferences.

An examination of the economic and political reasons that motivate nations in their relations with one another. This course is designed to give the student a clear insight into the *actual causes*, whether economic or otherwise, that induce States to adopt one policy or another in the international sphere of their activity. (Jaeger.)

HOME ECONOMICS

Professors Mount, McFarland; Associate Professor Welsh;
Assistant Professor Murphy; Mrs. Westney;
Miss Hartmann.

Textiles and Clothing

H. E. 11 f. *Textile Fabrics* (3)—Two recitations; one laboratory.

History of textile fibers; standardization and identification of textile fibers and materials. (Westney.)

H. E. 12 s. *Clothing Construction* (3)—One recitation; two laboratories.

Construction and care of clothing; clothing budget. (Westney.)

For Advanced Undergraduates

H. E. 111 f. *Advanced Clothing* (4)—One recitation; three laboratories. Prerequisites, H. E. 11 f; H. E. 12 s, or its equivalent.

The modeling and draping of dresses, emphasizing the relationship of line, form, color, and texture, to the individual. (Westney.)

H. E. 112 s. *Special Clothing Problems* (3)—One recitation; two laboratories. Prerequisites H. E. 111 f.

Each student selects an individual clothing study. (Westney.)

H. E. 113 f. *Problems and Practice in Textiles or Clothing* (5)—Prerequisite, H. E. 111 f.

Opportunity for experience and study in laboratories, or museums. (McFarland.)

H. E. 114 f or s. *Advanced Textiles* (3)—Two recitations; one laboratory.

Advanced study of textiles; historic textiles; those economic phases of the textile industry which affect the consumer.

Foods and Nutrition

H. E. 31 y. *Elementary Foods* (6)—One recitation; two laboratories. General Chemistry. (Chem. 1 y) to be taken concurrently.

Principles of cookery; composition of foods; planning and serving of meals. (Welsh and Assistants.)

For Advanced Undergraduates

H. E. 131 f. *Nutrition* (3)—Three recitations. Prerequisite, H. E. 31 y. Elements of Organic Chemistry (Chem. 12 f) to be taken concurrently.

Nutritive value, digestion and assimilation of foods. (Welsh.)

H. E. 132 s. *Nutrition* (3)—Two recitations; one laboratory. Prerequisite, H. E. 131 f.

Selection of food to promote health; special diets. (Welsh.)

H. E. 133 f. *Demonstrations* (2)—Two laboratories.

Practice in demonstrations. (Welsh.)

H. E. 134 s. *Advanced Foods* (3)—One recitation; two laboratories. Prerequisite, H. E. 31 y.

Advanced study of manipulation of food materials. (Welsh.)

H. E. 135 f. *Problems and Practice in Foods* (5).

Experimental foods. (Welsh.)

H. E. 136 s. *Child Nutrition* (2). One recitation; one laboratory.

Lectures, discussions, and field trips relating to the principles of Child Nutrition.

For Graduates

H. E. 201 f or s. *Seminar in Nutrition* (3).

Oral and written reports on assigned readings in the current literature of Nutrition. Preparation and presentation of reports on special topics.

H. E.202 f or s. *Special Problems in Foods.* Credit to be determined by amount and quality of work done.

With the approval of the head of the department, students may pursue an original investigation in some phase of foods. The result may form the basis of a thesis for an advanced degree.

H. E. 203 f or s. *Advanced Nutrition* (3)—One recitation; two laboratories.

A survey of methods of feeding experiments with an opportunity to conduct such experiments with small laboratory animals.

Art

H. E. 21 f. *Principles of Design* (3)—One recitation; two laboratories. Space division and space relation; color theory and harmony; original designs in which lines, notan, and color are used to produce fine harmony. (McFarland.)

H. E. 22 s. *Still Life* (1)—One laboratory. Prerequisite, H. E. 21 f. Work in charcoal and color. (McFarland.)

H. E. 23 s. *Figure Sketching* (1)—One laboratory. Alternates with Still Life (H. E. 22 s.) (McFarland.)

H. E. 24 s. *Costume Design* (3)—One recitation; two laboratories. Prerequisite, H. E. 21 f.

The application of color, harmony, and proportion to costume. (McFarland.)

For Advanced Undergraduates

H. E. 121 s. *Interior Decoration* (3)—Two recitations; one laboratory. Prerequisite, H. E. 21 f.

History of Architecture and period furniture; application of principles of color and proportion to home decoration. (Murphy.)

H. E. 122 s. *Applied Art* (1)—One laboratory.

Application of the principles of design and color to practical problems. (Murphy.)

H. E. 123 s. *Advanced Design* (3)—Three laboratories. Prerequisites, H. E. 24 s and 21 f.

Advanced study in design with application to particular problems. (McFarland.)

H. E. 124 f. *History of Art* (3)—Three recitations.

An introduction to the history of art, with emphasis upon the development of sculpture, painting, and architecture, from the earliest ages to the present. (Mrs. McFarland.)

H. E. 125 s. *History of Art* (3)—Three recitations.

Continuation of 124 f. (Mrs. McFarland.)

Home and Institutional Management

H. E. 141 f. *Management of the Home* (3)—Three recitations.

History of the family and of the home; the house, its structure and furnishings; purchasing of all household commodities.

H. E. 142 s. *Management of the Home* (3)—Three recitations.

Management of the home and family; relation of the members of the family to each other and to the community.

H. E. 143 f. *Practice in Management of the Home* (5).

Experience in operating and managing a household composed of a member of the faculty and a small group of students for approximately one-third of a semester. (Murphy.)

H. E. 144 y. *Institutional Management* (6)—Three recitations.

The organization and management of institutional dining halls, dormitories, and laundries; and of commercial cafeterias, tea-rooms, and restaurants. (Hartmann.)

H. E. 145 f. *Practice in Institutional Management* (5)—Prerequisite, H. E. 144 y.

Practice work in the University Dining Hall, in a tea room, or in a cafeteria. (Hartmann.)

H. E. 146 s. *Advanced Institutional Management* (3)—Prerequisite, H. E. 145 f. One recitation weekly and individual conferences with the instructors.

Special problems in Institutional Management. (Mount and Hartmann.)

Home Economics Extension

H. E. 151 f. *Field Practice in Home Economics Extension* (5)—Given under the direction of Miss Venia Kellar, State Home Demonstration Agent.

Home Economics Seminar

H. E. 161 s. *Seminar* (3)—Three recitations.

Book reviews and abstracts from scientific papers and bulletins relating to Home Economics, together with criticisms and discussions of the work presented. (Staff.)

HOME ECONOMICS EDUCATION

Professor McNaughton; Miss Kirk.

H. E. Ed. 100 s. *Technic of Teaching* (3)—Two lectures; one laboratory. Required of juniors in Home Economics Education. Prerequisite, Ed. 101 f.

The nature of educational objectives; construction of units; observations and critiques; survey of teaching methods; class management. (McNaughton.)

H. E. Ed. 101 s. *Child Psychology* (3)—Three lectures. Open to juniors.

Study of the nervous system; the glandular system; development of sensations; habit formation; emotional controls. (McNaughton.)

H. E. Ed. 102 f. *Child Study* (5).

Child psychology, with observation and work in the Washington Child Research Center; books, games, and music for children; physical care; study of physical and mental growth. (McNaughton.)

H. E. Ed. 103 f. *Teaching Secondary Vocational Home Economics: Methods and Practice* (5)—Prerequisite, H. E. Ed. 100 s.

Objectives of vocational home economics; the Smith-Hughes law and its administration; a survey of the needs of the high school girl; adaptation of the state course of study to the needs of the community; methods of instruction; use of the home project; use of illustrative material; improvement of home economics library; study of equipment; outline units of instruction; observation; participation teaching, conferences, and critiques. (McNaughton and Kirk.)

H. E. Ed. 104 s. *Education of Women* (3). Three lectures.

History of the family; the effect of civilization upon the organization of the home and the status of its members; educational opportunities for women; training for citizenship, professions, and the home. (McNaughton.)

H. E. Ed. 105 f. *Special Problems in Child Study* (5)—Open to seniors.

A course for students wishing advanced work in Child Study; special work at the Washington Child Research Center. Prerequisite, H. E. Ed. 102 f. (McNaughton.)

For Graduates

H. E. Ed. 200 f. *Seminar in Home Economics Education* (3-5).

Principles of progressive education as applied to the teaching of home economics; study of early educational experiments as compared with advanced schools of the present day; the adaptation of home economics to present needs. (McNaughton.)

HORTICULTURE

Professors Auchter, Schrader, Thurston; Lecturer Boswell;
Associate Professor Wentworth; Mr. Cordner.

A. Pomology

Hort. 1 f. *Elementary Pomology* (3)—Two lectures; one laboratory.

A general course in pomology. The proper location and site for an orchard; varieties, planting plans, pollination requirements, inter-crops, spraying, cultural methods, fertilizing methods, thinning, picking, packing, and marketing are given consideration. These subjects are discussed for apples, peaches, pears, plums, cherries, and quinces. The principles of plant propagation as applied to pomology are also discussed.

Hort. 2 f. *Systematic Pomology* (3)—Two lectures; one laboratory.

The history, botany, and classification of fruits and their adaptation to Maryland conditions. Exercises are given in describing and identifying the leading commercial varieties of fruits. Students are required to help set up the fruit show each year. (Not offered 1933-1934.) Given in alternate years.

Hort. 3 f. *Advanced Practical Pomology* (1)—Senior year. Prerequisites, Hort. 1 f and 101 f.

A trip occupying one week's time will be made through the principal fruit regions of eastern West Virginia, Maryland, and Pennsylvania. A visit to the fruit markets of several large cities will be made. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

Hort. 4 s. *Small Fruit Culture* (2)—One lecture; one laboratory. (Not offered in 1933-1934.) Given in alternate years.

The care and management of small fruit plantations. Varieties and their adaptation to Maryland soils and climate, packing, marketing, and a study of the experimental plots and varieties on the Station grounds. The following fruits are discussed: the grape, strawberry, blackberry, blackcap raspberry, red raspberry, currant, gooseberry, dewberry, and loganberry.

Hort. 5 f. *Fruit and Vegetable Judging* (2)—Two laboratories.

A course designed to train students for fruit-judging teams and practical judging. Students are required to know at least one hundred varieties of fruit, and are given practice in judging single plates, largest and best collections, boxes, barrels, and commercial exhibits of fruits and vegetables. Students are required to help set up the college horticultural show each year.

Hort. 6 f. *Advanced Fruit Judging* (1)—One laboratory.

B. Vegetable Crops

Hort. 11 s. *Principles of Vegetable Culture* (3)—Two lectures; one laboratory.

A study of fundamental principles underlying all garden practices. Each student is given a small garden to plant, cultivate, spray, fertilize, harvest, etc.

Hort. 12 f. *Truck Crop Production* (3)—Three lectures. Prerequisite, Hort. 11 s.

A study of methods used in commercial vegetable production. Each individual crop is discussed in detail. Trips are made to large commercial gardens, various markets, and other places of interest.

Hort. 13 s. *Vegetable Forcing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 11 s. (Not offered in 1933-1934.) Given in alternate years.

All vegetables used for forcing are considered. Laboratory work in sterilization and preparation of soils, cultivation, regulation of temperature and humidity, watering, training, pruning, pollination, harvesting, and packing.

C. Floriculture

Hort. 21 f. *General Floriculture* (2)—One lecture; one laboratory.

The management of greenhouse; the production and marketing of florists' crops; retail methods; plants for house and garden. (Not offered in 1932-1933.) Given in alternate years.

Hort. 22 y. *Greenhouse Management* (6)—Two lectures; one laboratory.

A consideration of the methods employed in the management of greenhouses, including the operations of potting, watering, ventilating, fumigation, and methods of propagation. (Not given in 1933-1934.) Given in alternate years.

Hort. 23 y. *Floricultural Practice* (4)—Two laboratories.

Practical experience in the various greenhouse operations of the fall, winter, and spring seasons.

Hort. 24 s. *Greenhouse Construction* (2)—One lecture; one laboratory.

The various types of houses; their location, arrangement, construction, and cost; principles and methods of heating; preparation of plans and specifications for commercial and private ranges. (Not offered in 1933-1934.) Given in alternate years.

Hort. 25 y. *Commercial Floriculture* (6)—Two lectures; one laboratory. Prerequisite, Hort. 22 y.

Cultural methods of florists' bench crops and potted plants, the marketing of the cut flowers, the retail store, a study of floral decoration. (Not offered in 1932-1933.) Given in alternate years.

Hort. 26 f. *Garden Flowers* (3)—Two lectures; one laboratory.

Plants for garden use; the various species of annuals, herbaceous perennials, bulbs, bedding plants and roses and their cultural requirements. (Not offered in 1933-1934.) Given in alternate years.

Hort. 27 s. *Floricultural Trip* (1)—Prerequisite, Hort. 22 y.

A trip occupying one week's time will be made through the principal floricultural sections, including Philadelphia and New York, visiting greenhouse establishments, wholesale markets, retail stores, nurseries, etc. The cost of this trip should not exceed thirty dollars to each student. Each student will be required to hand in a detailed report covering the trip. The time for taking this trip will be arranged yearly with each class.

D. Landscape Gardening

Hort. 31 s. *General Landscape Gardening* (2)—Two lectures.

The theory and general principles of landscape gardening and their application to private and public areas. Special consideration is given to the improvement and beautification of the home grounds, farmsteads, and small suburban properties. Adapted to students not intending to specialize in landscape, but who wish some theoretical and practical knowledge of the subject. (Not offered in 1932-1933.) Given in alternate years.

Hort. 32 f. *Elements of Landscape Design* (3)—One lecture; two laboratories. Prerequisite, Hort. 31 s.

A consideration of the principles of landscape design; surveys, mapping, and field work. (Not offered in 1933-1934.) Given in alternate years.

Hort. 33 s. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 32 f.

The design of private grounds and gardens and of architectural details used in landscape; planting plans; analytical study of plans of practicing landscape architects; field observation of landscape developments. (Not offered in 1933-1934.) Given in alternate years.

Hort. 34 f. *Landscape Design* (3)—Three laboratories. Prerequisite, Hort. 33 s.

Continuation of course as outlined above. (Not offered in 1932-1933.) Given in alternate years.

Hort. 35 f. ***History of Landscape Gardening*** **(1)—One lecture. Prerequisite, Hort. 31 s.**

Evolution and development of landscape gardening; the different styles and a particular consideration of Italian, English, and American gardens. (Not offered in 1933-1934.) Given in alternate years.

Hort. 36 s. *Landscape Construction and Maintenance* (1)—One lecture or laboratory.

Methods of construction and planting; estimating; park and estate maintenance. (Not offered in 1933-1934.) Given in alternate years.

Hort. 37 s. *Civic Art* (2)—One lecture; one laboratory.

Principles of city planning and their application to village and rural improvement, including problems in design of civic center, parks, school grounds, and other public and semi-public areas. (Not offered in 1932-1933.) Given in alternate years.

E. General Horticulture Courses

Hort. 41 s. *Horticultural Breeding Practices* (1)—One laboratory. Senior year. Prerequisites, Genetics (Gen. 101), General Plant Physiology (Plt. Phys. 1 f.)

Practice in plant breeding, including pollination, hybridization, selection, note-taking, and the general application of the theories of heredity and selection to practice are taken up in this course.

Hort. 42 y. *Horticultural Research and Thesis* (4-6).

Advanced students in any of the four divisions of horticulture may select some special problem for individual investigation. This may be either the summarizing of all the available knowledge on a particular problem or the investigation of some new problem. Where original investigation is carried on, students should in most cases start the work during the junior year. The results of the research work are to be presented in the form of a thesis and filed in the horticultural library.

Hort. 43 y. *Horticultural Seminar* (2).

In this course papers are read by members of the class upon subjects pertaining to their research or thesis work or upon special problems assigned them. Discussions of special topics are given from time to time by members of the departmental staff.

For Advanced Undergraduates and Graduates

Hort. 101 f. *Commercial Fruit Growing* (3)—Two lectures; one laboratory. Prerequisite, Hort. 1 f.

The proper management of commercial orchards in Maryland. Advanced work is taken up on the subject of orchard culture, orchard fertilization, picking, packing, marketing, and storing of fruits; orchard by-products, orchard heating, and orchard economics. (Not offered in 1932-1933.) Given in alternate years.

Hort. 102 f. *Economic Fruits of the World* (2)—Two lectures. Prerequisites, Hort. 1 f and Hort. 101 f.

A study is made of the botanical ecological, and physiological characteristics of all species of fruit-bearing plants of economic importance, such as the date, pineapple, fig, olive, banana, nut-bearing trees, citrus fruits, and newly introduced fruits, with special reference to their cultural requirements in certain parts of the United States and the insular possessions. All fruits are discussed in this course which have not been discussed in a previous course. (Not offered in 1933-1934.) Given in alternate years.

Hort. 103 f. *Tuber and Root Crops* (2)—One lecture; one laboratory. Prerequisites, Hort. 11 s and 12 f. Given in alternate years.

A study of white potatoes and sweet potatoes, considering seed, varieties, propagation, soils, fertilizers, planting, cultivation, spraying, harvesting, storing, and marketing.

Hort. 104 s. *Advanced Truck Crop Production* (2)—Prerequisites, Hort. 11 s, 12 f, and 13 s.

A trip of one week is made to the commercial trucking section of Maryland, Delaware, New Jersey, and Pennsylvania. A study of the markets in several large cities is included in this trip. Students are required to hand in a detailed report of this trip. The cost of such a trip should not exceed thirty dollars per student. The time will be arranged each year with each class.

Hort. 105 f. *Systematic Olericulture* (3)—Two lectures; one laboratory. Prerequisites, Hort. 11 s and 103 f. (Not offered in 1932-1933.) Given in alternate years.

A study of the classification and nomenclature of vegetables. Descriptions of varieties and adaptation of varieties to different environmental conditions.

Hort. 106 y. *Plant Materials* (5)—One lecture; one or two laboratories. (Not offered in 1932-1933.) Given in alternate years.

A field and laboratory study of trees, shrubs, and vines used in ornamental planting.

For Graduates

Hort. 201 y. *Experimental Pomology* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in pomology; methods and difficulties in experimental work in pomology and results of experiments that have been or are being conducted in all experiment stations in this and other countries.

Hort. 202 y. *Experimental Olericulture* (6)—Three lectures.

A systematic study of the sources of knowledge and opinion as to practices in vegetable growing; methods and difficulties in experimental work in vegetable production and results of experiments that have been or are being conducted in all experiment stations in this and other countries.

Hort. 203 s. *Experimental Floriculture* (2)—Two lectures.

A systematic study of the sources of knowledge and opinions as to practice in floriculture are discussed in this course. The results of all experimental work in floriculture which have been or are being conducted will be thoroughly discussed.

Hort. 204 s. *Methods of Research* (2)—One lecture; one laboratory.

For graduate students only. Special drill will be given in the making of briefs and outlines of research problems, in methods of procedure in conducting investigational work, and in the preparation of bulletins and reports. A study of the origin, development, and growth of horticultural research is taken up. A study of the research problems being conducted by the Department of Horticulture will be made, and students will be required to take notes on some of the experimental work in the field and become familiar with the manner of filing and cataloging all experimental work.

Hort. 205 y. *Advanced Horticultural Research and Thesis* (4, 6, or 8).

Graduate students will be required to select problems for original research in pomology, vegetable gardening, floriculture, or landscape gardening. These problems will be continued until completed, and final results are to be published in the form of a thesis.

Hort. 206 y. *Advanced Horticultural Seminar* (2).

This course will be required of all graduate students. Students will be required to give reports either on special topics assigned them, or on the progress of their work being done in courses. Members of the departmental staff will report special research work from time to time.

Requirements of Graduate Students in Horticulture

Pomology—Graduate students specializing in Pomology who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 1 f, 2 f, 101 f, 102 f, 201 y, 204 s, 205 y, and 206 y; Plant Biochemistry (Plt. Phys. 201 s); Plant Microchemistry (Plt. Phys. 203 s); Plant Biophysics (Plt. Phys. 202 f); Organic Chemistry (Chem. 8 y); Plant Anatomy (Bot. 101 f), and Mycology (Bot. 102 f).

Olericulture—Graduate students specializing in vegetable gardening who are planning to take an advanced degree will be required either to take or offer the equivalent of the following courses: Hort. 12 f, 13 s, 103 f, 105 f, 202 y, 204 s, 205 y, and 206 y; Plant Microchemistry (Plt. Phys. 203 s); Plant Biochemistry (Plt. Phys. 201 s); Plant Biophysics (Plt. Phys. 202 f); Organic Chemistry (Chem. 8 y); Plant Anatomy (Bot. 101 f), and Mycology (Bot. 102 f).

Floriculture—Graduate students specializing in floriculture who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 22 y, 23 y, 24 s, 25 y, 26 f, 203 s, 204 s, 205 y, and 206 y; Plant Biophysics (Plt. Phys. 202 f); Plant Biochemistry (Plt. Phys. 201 s); Botany 103 f or s, Organic Chemistry (Chem. 8 y), Botany 101 f and 102 f, and Plant Physiology 101 s, and 203 s.

Landscape Gardening—Graduate students specializing in landscape gardening who are planning to take an advanced degree will be required to take or offer the equivalent of the following courses: Hort. 32 f, 33 s, 35 f, 105 f, 204 s, and 206 y; Botany 103 f or s; Drafting 1 y and 2 y; Plane Surveying (Surv. 2 y), and Plant Ecology (Plt. Phys. 101 s).

Additional Requirements—In addition to the above required courses, all graduate students in horticulture are advised to take physical and colloidal chemistry.

Unless graduate students in Horticulture have had certain courses in entomology, plant pathology, genetics, and biometry, certain of these courses will be required.

Note: For courses in Biochemistry and Biophysics, see Plant Physiology, under Botany.

LATIN

PROFESSOR SPENCE.

LAT. 1 y. *Elementary Latin* (8)—Four lectures.

This course is offered to cover a substantial and accurate course in Grammar and Syntax, with translation of simple prose. It is substantially the equivalent of one entrance unit in Latin.

LAT. 2 y. (8)—Four lectures. Prerequisite, Lat. 1 y or one entrance unit in Latin.

Texts will be selected from Virgil, with drill on prosody, and Cicero.

LIBRARY SCIENCE

MISS GRACE BARNES, MR. GEORGE FOGG.

L. S. 1 f or s. *Library Methods* (1)—Freshman year. Required of students registered in the College of Arts and Sciences. Elective for others.

This course is intended to help students use the library with greater facility. Instruction is given by practical work with the various catalogs, indexes, and reference books. This course considers the general classification of the library according to the Dewey system. Representative works of each division are studied in combination with the use of the library catalogue. Attention is given to periodical literature, particularly that indexed in the Reader's Guide and in other periodical indexes; and to various much-used reference books which the student will find helpful throughout the college course.

MATHEMATICS

PROFESSORS T. H. TALIAFERRO, GWINNER; ASSOCIATE PROFESSOR DANTZIG;
ASSISTANT PROFESSORS SPANN, YATES; MR. ALRICH, MR. STINSON,
MISS KALMBACH, MR. BURGER.

MATH. 1 f. *Algebra* (3)—Three lectures. Required of Pre-medical, Pre-dental, Business Administration, and certain Chemistry students, and alternative for others in the College of Arts and Sciences. Elective for other students. Prerequisite, Algebra to Quadratics.

This course includes the study of quadratics, simultaneous quadratic equations, graphs, progressions, elementary theory of equations, binomial theorem, permutations, combinations, etc.

MATH. 2 s. *Plane Trigonometry* (3)—Three lectures. Required of Pre-medical, Pre-dental, Business Administration, and certain Chemistry students, and alternative for others in the College of Arts and Sciences. Elective for other students. Prerequisites, Math. 1 f and Plane Geometry.

A study of the trigonometric functions and the deduction of formulas with their application to the solution of plane triangles and trigonometric equations.

MATH. 3 f. *Advanced Algebra; Trigonometry* (5)—Five lectures. Required of freshmen in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisites, Algebra completed and Solid Geometry.

a. Advanced Algebra includes a rapid review of algebra required for entrance, elementary theory of equations, binomial theorem, permutations, combinations, and other selected topics.

b. Trigonometry includes trigonometric functions, the deduction of formulas and their application to the solution of plane triangles, trigonometric equations, spherical triangles, etc.

This course will be repeated during the second semester.

MATH. 4 s. *Analytic Geometry* (5)—Five lectures. Required of students in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 3 f.

This course includes a study of the curve and equation, the straight line, the conic sections, empirical equations, transcendental curves, the plane and the straight line in space, and the quadric surfaces.

An opportunity is also afforded to take this course during the summer.

MATH. 5 y. *Calculus and Plane Analytic Geometry* (6)—Three lectures. Required of students in Chemistry other than Industrial Chemistry. Elective for other students. Prerequisites, Math. 1 f and 2 s.

Emphasis will be placed on calculus including the study of the methods of differentiation and integration and the application of these methods in determining maxima and minima, areas, length of curves, etc., in the plane.

Plane analytic geometry will, wherever possible, be attacked from the viewpoint of the calculus, and includes the study of the loci of equations in two variables, the straight line, conic sections and transcendental curves, and the development of empirical equations from graphs.

MATH. 6 y. *Calculus; Elementary Differential Equations* (10)—Five lectures. Required of sophomores in the College of Engineering and in Industrial Chemistry. Elective for other students. Prerequisite, Math. 4 s.

Calculus is studied throughout the year. In the second semester several weeks are devoted to the study of elementary differential equations.

Calculus includes a discussion of the methods of differentiation and integration and the application of these methods in determining maxima and minima, areas, length of curves, etc., in the plane; and the determination of areas, volumes, etc., in space.

The first semester of this course will be repeated in the second semester, and an opportunity afforded to take the second semester of this course during the summer.

MATH. 7 s. *Solid Geometry* (2)—Two lectures. Prerequisite, Plane Geometry completed. Open only to freshmen. Elective. College credit given only to students in the College of Education. Other students may take course without credit.

The course covers the line, the plane, polyhedrons, cylinders, cones, and the sphere.

For Advanced Undergraduates and Graduates

MATH. 101 f. *The Mathematical Theory of Investment* (3)—Three lectures. Prerequisites, Math. 1 f and 2 s. Open only to juniors and seniors. Required of students in Business Administration.

The application of mathematics to financial transactions; compound interest and discount, construction and use of interest tables; sinking funds, annuities, depreciation, valuation and amortization of securities, building and loan associations, life insurance, etc. (Alrich.)

MATH 102 s. *Elements of Statistics* (3)—Three lectures. A continuation of Math. 101 f. Prerequisites, Math. 1 f and 2 s. Open only to juniors and seniors. Required of students in Business Administration.

A study of the fundamental principles used in statistical investigation. See Genetics 114 s. (Kemp.)

MATH. 103 f. *Differential Equations* (3)—Three lectures. Elective. Prerequisite, Math. 6 y, or Math. 5 y and consent of instructor.

Integration of ordinary differential equations. Singular solutions. Integration by Series. Applications to Geometry, Physics, etc. (Dantzig.)

MATH. 104 s. *Theoretical Mechanics.* (3)—Three lectures. Elective. Prerequisite, Math. 6 y, or Math. 5 y and consent of instructor.

Elementary Vector Analysis. Statics. Kinematics. The equations of Motion. Applications. (Alrich.)

MATH. 105 f. *Advanced Topics in Algebrba* (3)—Three lectures. Elective.

Theory of Equations. Galois Groups. Matrices and Determinants. Linear Substitutions. Quadratic Forms. (Dantzig.)

MATH. 106 s. *Advanced Topics in Geometry* (3)—Three lectures. Elective.

The Conic Sections. Homogeneous Co-ordinates. The Quadric Surfaces. Collineations. Principles of Projective Geometry. (Dantzig.)

MATH. 107 f. *Elementary Theory of Functions* (3)—Three lectures. Elective.

Functions of a Real Variable. Polynomials and Rational Functions. Transcendental Functions. Principles of Graphing and of Approximation. (Dantzig.) (Not given in 1932-1933.)

MATH. 108 s. *Vector Analysis* (3)—Three lectures. Elective.

Vector Algebra. Applications to geometry and physics. Vector differentiation and integration. Applications to mathematical physics. (Dantzig.) (Not given in 1932-1933.)

MATH. 109 f. *History of Mathematics* (3)—Three lectures. Elective.

The course will deal with the historical development of mathematical ideas and methods. Special emphasis will be placed on the Greek period and the period of the Revival of Learning. The history of Arithmetic, Algebra, and Geometry will receive particular attention. (Taliaferro.) (Not given in 1932-1933.)

MATH. 110 f. *Special Topics* (3)—Three lectures. Elective.

This course is designed particularly, but not exclusively, for students majoring in Mathematics who expect to become teachers. Consideration will be given to some of the high points of Algebra, Trigonometry, Analytics, and Calculus. Attention will also be given to the Elementary Theory of Numbers. (Taliaferro.)

For Graduates

MATH. 201 y. *Seminar and Thesis* (4-10)—Credit hours will be given in accordance with work done. (Dantzig.)

MATH. 202 f. *Fundamental Concepts of Mathematics* (2)—Two lectures. Elective.

A historical and critical survey of the Number Concept, Limit and Infinitesimals. The space, and the various geometries. The concept of time and one Relativity Theory. The concept of Chance and its application to natural and social sciences. (Dantzig.)

MATH. 203 s. *Theory of Transformations* (2)—Two lectures. Elective.

Mathematical operations. The idea of Group. The Metric Group. The Projective Group. The Conformal Group. Invariants. (Dantzig.) (Not given in 1932-1933.)

MATH. 204 s. *Selected Topics in Mathematics* (2)—Two lectures. Elective.

This course, designed for advanced students in the science, begins with a brief review of calculus, mechanics, and elementary differential equations. Particular attention will be paid to consideration of problems in vibration with applications to molecular structure. Special topics which will also be briefly treated include a study of the wave equation, Fourier's Series, Harmonic Analysis, Gamma and Beta functions, Legendre polynomials, etc. (Yates.)

MILITARY SCIENCE AND TACTICS

Assistant Professors Upson, Shepard, Young;
Mr. McManus, Mr. Hendricks.

M. I. 1 y. *Basic R. O. T. C.* (2)—Freshman year.

The following subjects are covered:

First Semester

Military Courtesy, Command and Leadership, Physical Drill, Military Hygiene and First Aid.

Second Semester

Physical Drill, Command and Leadership, Marksmanship, Scouting and Patrolling.

M. I. 2 y. *Basic R. O. T. C.* (4)—Sophomore year.

The following subjects are covered:

First Semester

Musketry, Command and Leadership, Scouting and Patrolling.

Second Semester

Combat Principles, the Rifle Squad, Automatic Rifle, Command and Leadership.

M. I. 101 y. *Advanced R. O. T. C.* (6)—Junior year.

The following subjects are covered:

First Semester

Infantry Weapons (Machine Guns), Command and Leadership.

Second Semester

Infantry Weapons (Machine Guns, 37 m/m Gun and 3-inch Trench Mortar), Military Sketching and Map Reading, Command and Leadership, Combat Principles, the Section and Platoon.

M. I. 102 y. *Advanced R. O. T. C.* (6)—Senior year.

The following subjects are covered:

First Semester

Military Organization, Combat Principles (the Company), Command and Leadership, Military Field Engineering.

Second Semester

Administration, Command and Leadership, Military Law, Rules of Land Warfare, Military History, National Defense Act, and Pertinent Army Regulations.

MODERN LANGUAGES

Professor Zucker; Associate Professors Kramer, Deferrari;
Miss Wilcox, Mr. Schweizer, Miss Miller, Miss Pringle,
Mrs. Coxen, Miss Smith.

In the elementary instruction in languages a differentiation is introduced between students whose chief interest lies in science and those who are studying a language for cultural purposes or with the aim of becoming teachers in this field. For the latter an additional two-hour course in pronunciation and conversation is offered in the second semester, while the former take only the three-hour course designed to give simply a reading knowledge.

Students in the College of Education and in the College of Arts and Sciences (except those carrying special curricula outlined in Section I) will not receive credit for the elementary language course unless they have successfully completed the full eight hours of the first year work.

A. French

French 1 y. *Elementary French* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

French 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Fr. 1 y. (See paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

French 3 y. *Second-Year French* (6)—Three lectures. Prerequisite, French 1 y and 2 s or equivalent.

Study of grammar continued; composition, conversation, translation. Texts selected from modern prose.

French 4 y. *The Development of the French Novel* (6)—Three lectures and reports.

Introductory study of the history and growth of the novel in French literature; of the lives, work, and influence of various novelists. (Offered 1932-1933.)

This course and the two following ones are offered in successive years.

French 5 y. *The Development of the French Drama* (6)—Three lectures and reports.

Introductory study of the French drama of the seventeenth, eighteenth, and nineteenth centuries. Translation and collateral reading. (Offered 1933-1934.)

French 6 y. *Readings in Contemporary French* (3)—Three lectures.

Translation; collateral reading; reports on history, criticism, fiction, drama, lyric poetry. (Offered 1934-1935.)

French 8 f. *French Phonetics* (2)—Two lectures. Prerequisite, French 1 y.

French 9 s. *French Grammar and Composition* (2)—Two lectures. Prerequisite, French 3 y.

(French 8 f and 9 s are required of students preparing to teach French.)

For Advanced Undergraduates and Graduates

(French 4 y, 5 y, 6 f, or equivalent are prerequisite for courses in this group.)

French 101 f. *History of French Literature in the Seventeenth Century* (3)—Three lectures. (Not given 1932-1933.)

French 102 s. *History of French Literature in the Eighteenth Century* (3)—Three lectures. (Not given 1932-1933.)

French 103 f. *History of French Literature in the Nineteenth Century* (3)—Three lectures. (Not given 1932-1933.)

French 104 s. *History of French Literature in the Nineteenth Century.* (3)—Three lectures.

Continuation of French 103 f. (Not given in 1932-1933.)

French 105 f. *The Renaissance in France* (3)—Three lectures. (Wilcox.)

French 106 s. *The Renaissance in France.* (3)—Three lectures. Continuation of French 105 f. (Wilcox.)

For Graduates

French 201 y. *Research and Thesis.* Credits determined by work accomplished.

French 207 f. *The Middle Ages in France* (3)—Three lectures.

Introduction to the study of the literature of the period, with some attention given to etymology and historical grammar. This course is strongly recommended to all those majoring in French.

French 208 s. *The Middle Ages in France* (3)—Three lectures. Continuation of French 207 f.

Attention is also called to Comparative Literature 105 y, *Romanticism in France, Germany, and England*, and to Modern Language 202 s, *Seminar.*

B. German

German 1 y. *Elementary German* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in German for entrance, but whose preparation is not adequate for second-year German, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

German 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements German 1 y (see paragraph 2, Department of Modern Languages). In it special emphasis is laid on pronunciation and conversation.

German 3 y. *Second-Year German* (6)—Three lectures. Prerequisite, German 1 y and 2 s or equivalent.

Reading of narrative and technical prose, grammar review, oral and written practice.

German 4 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent. (Not given 1932-1933.)

Rapid reading of novels and short stories from recent German literature.

German 5 s. *Advanced German* (3)—Three lectures. Continuation of German 4 f. (Not given 1932-1933.)

German 6 f. *Advanced German* (3)—Three lectures. Prerequisite, German 3 y or equivalent.

Rapid reading of dramas from recent German literature. This course alternates with German 4 f.

German 7 s. *Advanced German* (3)—Three lectures. Continuation of German 6 f.

For Advanced Undergraduates and Graduates

(Prerequisite for courses in this group, German 4 and 5 or equivalent.)

German 101 f. *German Literature of the Eighteenth Century* (3)—Three lectures.

The earlier classical literature. (Zucker.) (Not given 1932-1933.)

German 102 s. *German Literature in the Eighteenth Century* (3)—Three lectures. The later classical literature. (Zucker.) (Not given 1932-1933.)

German 103 f. *German Literature of the Nineteenth Century* (3)—Three lectures. Romanticism and Young Germany. (Zucker.)

German 104 s. *German Literature of the Nineteenth Century* (3)—Three lectures.

The literature of the Empire. (Zucker.)

For Graduates

German 201 y. *Research and Thesis*—Credits determined by work accomplished. (Zucker.)

German 202 y. *The Modern German Drama* (3)—Three Lectures. (Zucker.)

Attention is also called to Comparative Literature 105 y, *Romanticism in France, Germany, and England*, and to Modern Language 202 s., *Seminar.*

C. Spanish

Spanish 1 y. *Elementary Spanish* (6)—Three lectures. No credit given unless both semesters are completed. Students who offer two units in Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Elements of grammar, composition, pronunciation, and translation.

Spanish 2 s. *Pronunciation and Conversation* (2)—Two lectures.

This course supplements Spanish 1 y (see paragraph 2, Department of Modern Languages.) In it special emphasis is laid on pronunciation and conversation.

Spanish 3 y. *Second-Year Spanish* (6)—Three lectures. Prerequisite, Spanish 1 y and 2 s or equivalent.

Reading of narrative works and plays; grammar review; oral and written practice.

SPANISH 4 f. *Spanish Lyric Poetry* (3)—Three lectures. Prerequisite, Spanish 3 y or equivalent.

An introduction to Spanish literature with special attention to lyric poetry.

SPANISH 5 s. *Spanish Lyric Poetry* (3)—Three lectures. Continuation of Spanish 4 f.

SPANISH 6 f. *Spanish Conversation and Composition* (2)—Two lectures.

SPANISH 7 s. *Spanish Conversation and Composition* (2)—Two lectures. Continuation of Spanish 6 f.

For Graduates

SPANISH 201 f. *The Middle Ages in Spain* (3)—Three lectures.

Introduction to the study of the literature of the period, with some attention to etymology and historical grammar. This course is strongly recommended to all those whose major is Spanish.

SPANISH 202 s. *The Middle Ages in Spain* (3)—Three lectures. Continuation of Spanish 201 f.

SPANISH 203 y. *Research and Thesis.* Credits determined by work accomplished.

D. Comparative Literature

For Advanced Undergraduates and Graduates

The courses in Comparative Literature are, for the time being, under the direction of the Department of Modern Languages. They may be elected as partially satisfying major and minor requirements in this department. Comparative Literature 101 f, 102 s, 104 s, and 105 y may also be counted toward a major or minor in English.

COM. LIT. 101 f. *Introduction to Comparative Literature* (3)—Three lectures.

Survey of the background of European literature through study in English translation of Greek and Latin literature. Special emphasis is laid on the development of the epic, tragedy, comedy, and other typical forms of literary expression. The debt of modern literature to the ancients is discussed and illustrated. (Zucker.)

COM. LIT. 102 s. *Introduction to Comparative Literature* (3)—Three lectures.

Continuation of 101 f; study of medieval and modern Continental literature. (Zucker.)

COM. LIT. 104 s. *The Modern Ibsen* (2)—Two lectures. Lectures on the life of Ibsen and the European drama in the middle of the Nineteenth Century. Study of Ibsen's social and symbolical plays in Archer's translation. (Zucker.)

COM. LIT. 105 y. *Romanticism in France, Germany, and England* (6)—Three lectures and reports.

Introduction to the chief authors of the Romantic movement in England, France, and Germany, the latter two groups being read in English translation. Lectures on the chief thought currents and literary movements of the late eighteenth and early nineteenth centuries. First semester: Rosseau to Gautier; Buerger to Heine. Second semester: Wordsworth, Coleridge, Landor, Byron, Shelley, Keats, and others. The course is conducted by members of both the Modern Language and the English departments. (Wilcox, Zucker, Hale.)

COM. LIT. 106 s. *Life and Works of Goethe* (2)—Two lectures. (Not given 1932-1933.)

MODERN LANGUAGE 202 s. *Seminar* (1). (Required of all graduate students in the department.) One meeting weekly.

MUSIC

MR. GOODYEAR; MRS. BLAISDELL.

MUSIC 1 y. *Music Appreciation* (2).

A study of all types of classical music with a view to developing the ability to listen and enjoy. Lecture recitals will be presented with the aid of performers and records. A study of the orchestra, the instruments that it employs. The development of the symphony and orchestra instruments for solo performance. The development of the opera and oratorio. Great singers of the past and present.

MUSIC 2 y. *University Chorus* (2).

Study of part-songs, cantatas, and oratorios. Credit is awarded for regular attendance at weekly rehearsals, and participation in public performances of the chorus.

Students admitted who have ability to read and sing music of the grade of easy church hymns. No student may receive more than four credits for work in University Chorus.

MUSIC 3 y. *University Orchestra* (1 credit for each semester satisfactorily completed).

The purpose of the University Orchestra is study of the classics. Works of the standard symphonists from Haydn and Mozart to Wagner and the modern composers are used. Students are eligible for membership who play orchestral instruments. At least one rehearsal of two hours duration is held each week, and all players are expected to take part in public performances.

MUSIC 4 y. *History of Music* (2)—One lecture.

A comprehensive course in the history of music covering the development of all forms of music from ancient times through the period of the renaissance; the classic and the romantic schools and the more modern composers.

(For courses in Voice and Piano, see under College of Arts and Sciences.)

PHILOSOPHY

PROFESSOR SPENCE.

PHIL. 1 f. *Introduction to Philosophy* (3)—Three lectures and assignments.

A study of the meaning and scope of philosophy; its relation to the arts, sciences, and religion. To be followed by Phil. 2 s. Not open to freshmen.

Phil. 2 s. *Problems and Systems of Philosophy* (3)—Three lectures and reports on the reading of representative works. Prerequisite, Phil. 1 f.

Study of the problems and systems of philosophy, together with tendencies of present-day thought. Not open to freshmen.

Myth. 1 s. *Mythology* (1)—One lecture.

Origin and reason of folklore and myth. Comparison of myths, mythology and modern thought.

For Advanced Undergraduates and Graduates

Phil. 101 y. *History of Philosophy* (6)—Three lectures. Senior standing required.

A study of the development of philosophy from prehistoric times, through Greek philosophy, early Christian philosophy, medieval philosophy to modern philosophical thought. (Spence.)

PHYSICAL EDUCATION FOR WOMEN

Miss Stamp, Miss Phillips.

Phys. Ed. 2 y. *Personal Hygiene* (1).

Freshman course required of all women.

This course consists of instruction in hygiene one period a week throughout the year. The health ideal and its attainment, care of the body relative to diet, exercise, sleep, bathing, etc., and social hygiene.

Phys. Ed. 4 y. *Physical Activities* (1).

Freshman course required of all women.

This is an activities course, which meets two periods a week throughout the year. It will present the following phases of physical education: sports, such as hockey, soccer, basketball, baseball, speedball, archery, and volleyball; natural activities, such as tumbling and stunts; and dancing, such as clog, folk, and athletic.

Phys. Ed. 6 y. *Personal Hygiene* (2).

Sophomore course required of all women.

This course is a continuation of the freshman course. The work in hygiene includes the elements of physiology, the elements of home, school, and community hygiene, and a continuation of social hygiene.

Phys. Ed. 8 y. *Physical Activities* (2).

Sophomore course required of all women.

This course is a continuation of the work of the freshman year. In addition to the regular work, the student is permitted to elect either clog, folk, or natural dancing.

Phys. Ed. 10 y. *Dancing* (4-8).

Required of all sophomores planning to make physical education a major, and open to other sophomores, juniors and seniors.

This course includes one lecture a week and from one to three periods of practical work. The lecture carries one semester hour of credit and each period of practical work likewise carries one semester hour of credit. A student may take the lecture work and any or all of the practical work. The following three types of practical work are offered:

A. *Clogs and Athletic* dances suitable for both high school boys and girls. Tap shoes will be required.

B. *Folk dances* of various countries.

C. *Natural dancing,* a type of dancing based upon free and natural movements, such as skipping, walking, running, etc.

A special costume will be required.

Both elementary and intermediate sections will be offered. Admission to the intermediate is with the approval of the instructor.

Phys. Ed. 12 f. *Games* (3).

Required of all sophomores whose major is physical education, and open to other undergraduates.

This course will aim to present games and stunts suitable for the elementary school and recreational groups. Both theory and practice will be offered. (Not given in 1932-1933.)

Phys. Ed. 14 s. *History of Physical Education* (3).

Required of all sophomores whose major is physical education.

This course aims to give the student a knowledge of the history of physical education with especial emphasis upon the richness of its background.

Phys. Ed. 16 f and s. *First Aid* (1).

This course is required of all juniors whose major is physical education.

It will aim to present the fundamentals necessary for caring for accidents and injuries until medical attention can be secured. Practical work will be required of all students.

Phys. Ed. 18 f and s. *Athletics* (4).

Required of all juniors whose major is physical education and open to other juniors and seniors.

This course includes one lecture a week, and two periods of practical work each semester. The practical work is organized in a series of sport units, four for each semester, as shown below and designated as "practical sections." Any three of the four may be selected.

First semester (18 f): Hockey, Soccer, Fieldball, Basketball. Second semester (18 s): Volleyball and Handball, Speedball, Archery, Baseball. Instruction will be given in the theory, practice, organization, and teaching of each sport. (Phillips.)

Phys Ed. 20 f and s. *Natural Gymnastics* (2-2).

Required of all juniors with a major in physical education for at least one semester.

This course presents stunts, games, self-testing activities based upon fundamental movements which are inherent in the race. Teaching technics will be considered and material offered which is suitable to varying age groups. (Phillips.)

PHYS. ED. 22 s. *Organization of Athletic Activities for Girls* (2). This course is open to seniors with a major in physical education.

A lecture course dealing with the organization of material and the developing of athletic activities for girls in such situations as camp, school, and playground. (Not given in 1932-1933.)

PHYS. ED. 26 y. *Coaching and Officiating; Athletics for Girls.* (Not given in 1932-1933.)

ED. 140 y. *Physical Education Activities for High School Girls* (4).

ED. 142 y. *Physical Education for Girls in Secondary Schools* (6).

PHYSICAL EDUCATION FOR MEN

PROFESSOR MACKERT.

PHYS. ED. 1 y. *Physical Activities* (2).

An activities course for freshman boys meeting three periods a week throughout the year. Activities included are soccer, touch football, basketball, volleyball, baseball (soft), track, and natural gymnastics.

PHYS. ED. 3 y. *Physical Activities* (4).

An activities class for sophomore boys meeting three periods a week throughout the year. Activities included are soccer, touch football, basketball, volleyball, track (indoor and outdoor), baseball (soft and hard), fencing, wrestling, boxing, ping pong, horseshoes, tennis, and natural gymnastics.

PHYS. ED. 11 y. *Personal Hygiene* (2).

Freshman course required of men whose major is physical education and open to other freshmen and sophomores.

This course is designed to help the incoming student live at his best and to realize the finest ideals of his group.

PHYS. ED. 13 y. *Coaching High School Athletics* (6).

Required of junior men whose major is physical education; elective for other junior and senior students.

Football, soccer, basketball, track, and baseball are analyzed from the point of view of successful team play on an interscholastic basis. (Mackert.)

PHYS. ED. 21 y. *Survey of Physical Education* (2).

Freshman course required of men whose major is physical education and open to women whose major is physical education.

This course is an introduction to the study of physical education. It includes a survey of the history of physical education and the possibilities of the profession.

PHYS. ED. 23 y. *Technics of Physical Education* (4).

Sophomore course required of men whose major is physical education.

A thorough study of various fundamental skills in the performance of physical activities.

PHYS. ED. 25 y. *Analysis of Physical Education Activities* (6).

Junior course for men whose major is physical education.

This course aims to analyze the values in physical activities of all types for high school boys. The program of natural activities will be offered as an illustration of physical education in the secondary school system. (Mackert.)

ED. 141 y. *Special Methods and Supervised Teaching of High School Physical Education* (6).

PHYSICS

PROFESSOR EICHLIN; MR. CLARK.

PHYS. 1 y. *General Physics* (8)—Three lectures; one laboratory. Required of students in the Pre-medical curriculum and in the General and Agricultural Chemistry curricula. Elective for other students. Prerequisites, Math. 1 f and 2 s.

A study of the physical phenomena in mechanics, heat, sound, magnetism, electricity, and light.

PHYS. 2 y. *General Physics* (10)—Four lectures; one laboratory. Required of all students in the Engineering and Industrial Chemistry curricula. Elective for other students. Prerequisites, Math. 3 f and 4 s.

A study of mechanics, heat, sound, magnetism, electricity, and light.

PHYS. 3 s. *Special Applications of Physics* (4)—Three lectures; one laboratory. Especially for students in Home Economics.

A discussion of the laws and theories of Physics from the viewpoint of their practical application.

For Advanced Undergraduates and Graduates

PHYS. 101 f. *Physical Measurements* (3)—Two lectures; one laboratory. Elective. Prerequisite, Phys. 1 y or 2 y.

This course is designed for the study of physical measurements and for familiarizing the student with the manipulation of the types of apparatus used in experimentation in physical problems. (Clark.)

PHYS. 102 y. *Graphic Physics* (2)—One lecture. Elective. Prerequisite, Phys. 1 y or 2 y.

A study of physical laws and formulae by means of scales, charts, and graphs. (Eichlin.)

PHYS. 103 f. *Advanced Physics* (3)—Two lectures; one laboratory. Required of students in the Industrial Chemistry curriculum. Elective for other students. Prerequisite, Phys. 2 y.

An advanced study of Molecular Physics, wave motion, and heat. (Eichlin.)

PHYS. 104 s. *Advanced Physics* (3)—Two lectures; one laboratory. Elective. Prerequisite, Phys. 2 y.

An advanced study of electricity and magnetism. (Eichlin.)

PHYS. 105 y. *Advanced Physics* (6)—Three lectures. Elective. Prerequisite, Phys. 1 y or 2 y.

A study of physical phenomena in optics, spectroscopy, conduction of electricity through gases, etc., with a comprehensive review of their basic underlying principles. (Eichlin.)

For Graduates

PHYS. 201 y. *Modern Physics* (6)—Three lectures. Elective.

A study of some of the problems encountered in modern physics. (Eichlin.)

POULTRY HUSBANDRY

PROFESSOR WAITE, ASSISTANT PROFESSOR QUIGLEY.

POULTRY 101 s. *Farm Poultry* (3)—Three lectures.

A general course in poultry raising, including housing, feeding, incubation, brooding, breeds, breeding, selection of stock, culling, general management, and marketing.

POULTRY 102 f. *Poultry Keeping* (4)—Two lectures; two laboratories. Prerequisite, Poultry 101 s.

A study of housing and yarding, practice in making poultry house plans, feeding, killing, and dressing.

POULTRY 103 s. *Poultry Production* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s and 102 f.

The theory and practice of incubation and brooding, both natural and artificial. Study of incubators and brooders, assembling, etc. Considerable stress will be placed on the proper growing of chicks into good laying pullets. General consideration of poultry disease. Caponizing.

POULTRY 104 f. *Poultry Breeds* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s, 102 f and 103 s.

A study of the breeds of poultry, the judging of poultry, fitting for exhibition, and the methods of improvement by breeding.

POULTRY 105 s. *Poultry Management* (4)—Two lectures; two laboratories. Prerequisites, Poultry 101 s, 102 f, 103 s, and 104 f.

A general fitting together and assembling of knowledge gained in the previous courses. Culling, marketing, including both selling of poultry products and the buying of supplies, keeping poultry accounts, hatchery management and operation, a study of poultry profits, how to start.

PSYCHOLOGY

ASSOCIATE PROFESSOR SPROWLS.

PSYCH. 1 f or s. *Elements of Psychology* (3)—Two lectures and one conference. Seniors in this course receive but two credits.

The concept of consciousness as dependent upon the reactions of the individual is applied to the problems of human behavior. In this course the fundamental facts and principles of mental life are presented as a basis, not only for better understanding the behavior of others, but also for the intelligent use of individual capacities and the formation of desirable personality and character traits. This course is given in both the first and second semesters.

See "Education" for description of the following courses:

ED. 101 f. *Educational Psychology* (3).
ED. 106 s. *Advanced Educational Psychology* (3).
ED. 107 f. *Educational Measurements* (3).
ED. 108 s. *Mental Hygiene* (3).

PUBLIC SPEAKING

PROFESSOR RICHARDSON; ASSISTANT PROFESSOR WATKINS, MISS BEALL, MRS. MACKERT.

P. S. 1 y. *Reading and Speaking* (2)—One lecture.

The principles and technique of oral expression; enunciation, emphasis, inflection, force, gesture, and the preparation and delivery of short original speeches. Impromptu speaking. Theory and practice of parliamentary procedure.

P. S. 2 f. *Advanced Public Speaking* (2)—Two lectures.

Advanced work on basis of P. S. 1 y, with special applications and adaptations. At each session of the class a special setting is given for the speeches—civil, social, and political organizations, etc., and organizations in the field of the prospective vocation of the different students. When a student has finished this course he will have prepared and delivered one or more speeches which would be suitable and appropriate before any and all bodies that he would probably have occasion to address in after-life.

P. S. 3 s. *Advanced Public Speaking* (2)—Two lectures. Continuation of P. S. 2 f.

P. S. 4 y. *Oral Technical English* (2)—One lecture.

The preparation and delivery of speeches, reports, etc., on both technical and general subjects. Argumentation. This course is especially adapted to the needs of engineering students and is co-ordinated with the seminars of the College of Engineering.

P. S. 5 y. *Advanced Oral Technical English* (2)—One lecture.

This course is a continuation with advanced work of P. S. 4 y. Much attention is given to parliamentary procedure. Some of the class programs are prepared by the students and carried out under student supervision. For junior engineering students only.

P. S. 6 y. *Advanced Oral Technical English* (2)—One lecture.

Advanced work on the basis of P. S. 5 y. Work not confined to class room. Students are encouraged to deliver addresses before different bodies in the University and elsewhere. Senior seminar. For senior engineering students only.

P. S. 7 f. *Extempore Speaking* (1)—One lecture.

Much emphasis on the selection and organization of material. Class exercises in speaking extemporaneously on assigned and selected subjects. Newspaper and magazine reading essential.

P. S. 8 s. *Extempore Speaking* (1)—One lecture.

Continuation of P. S. 7 f.

P. S. 9 f. *Debate* (2)—Two lectures.

A study of the principles of argumentation. A study of masterpieces in argumentative oratory. Class work in debating. It is advised that those who aspire to intercollegiate debating should take this course.

P. S. 10 s. *Argumentation* (2)—Two lectures.

Theory and practice of argumentation and debate. Similar to course P. S. 9 f. This course is offered for the benefit of those who may find it impracticable to take this work in the first semester.

P. S. 11 f. *Oral Reading* (1)—One lecture.

A study of the technique of vocal expression. The oral interpretation of literature. The practical training of students in the art of reading.

P. S. 12 s. *Oral Reading* (1)—One lecture.

Continuation of P. S. 11 f.

P. S. 13 f. *Advanced Oral Reading* (1)—One lecture. Prerequisite, P. S. 11 f or 12 s or the equivalent (if work is entirely satisfactory).

Advanced work in oral interpretation.

P. S. 14 s. *Advanced Oral Reading* (1)—One lecture. Prerequisite, P. S. 11 f or 12 s (if work is entirely satisfactory) or the equivalent.

Continuation of P. S. 13 f.

P. S. 15 f. *Special Advanced Speaking* (2)—Two lectures.

Class is organized as a Civic Club, and the work consists of such activities as are incident to such an organization—parliamentary law, committee work, prepared and impromptu speeches, etc.

Primarily for students in College of Education.

P. S. 16 s. *Special Advanced Speaking* (2)—Two lectures.

Continuation of P. S. 15 f.

For Graduates

P. S. 200 y. *Specialized Training for Professional Work* (2)—Two lectures.

Preparation and delivery of speeches adapted to the prospective professional work of the student.

ZOOLOGY AND AQUICULTURE

Professors Pierson, Truitt; Assistant Professor Phillips;
Mr. Burhoe, Miss Bernard, Miss Bray.

Zool. 1 f or s. *General Zoology* (4)—Two lectures; two laboratories.

An introductory course which is cultural and practical in its aim. It deals with the basic principles of animal development, structure, relationships, and activities which are valuable for a proper appreciation of the biological sciences, psychology, and sociology. Typical invertebrates and the white rat, or other mammal, are studied. Required of all students in Agriculture and Arts and Science Education.

Zool. 2 f. *Elements of Zoology* (4)—Two lectures; two laboratories.

Emphasis is given to the fundamentals of the biology of vertebrates with the frog as an example. The functions of the organ systems of man are reviewed. This course with Zool. 3 s satisfies the pre-medical requirements in biology. Freshmen who intend to choose zoology as a major should register for Zool. 2 f and Zool. 3 s.

Zool. 3 s. *Elements of Zoology* (4)—Two lectures; two laboratories. Prerequisite, Zool. 2 f.

Continuation of Zool. 2 f, presenting also many of the primary biological concepts and generalizations through the study of typical one-celled and the simpler many-celled animals. Students with credit for Zool. 1 f or s are not eligible for this course, but may be admitted to Zool. 2 f.

Zool. 4 s. *Economic Zoology* (2)—Two lectures. Prerequisite, one course in Zoology or Botany.

The content of this course will center around the problems of preservation, conservation, control, and development of the economic wild life of Maryland. The lectures will be supplemented by assigned readings and reports.

This course, combined with Zool. 6 s, should form a part of the basic training for professional foresters, game proctors, and conservationists.

Zool. 5 f. *The Invertebrates* (3)—One lecture; two laboratories. Prerequisite, Zool. 1 f or s.

This course consists in a study of the morphology and relationships of the invertebrate phyla. Required of students selecting Zoology and Aquiculture as the principal department in the major group.

Zool. 6 s. *Field Zoology* (3)—One lecture; two laboratories. Prerequisite, one course in Zoology or Botany.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with special emphasis placed upon insects and certain vertebrates, their breeding habits, environment, and economic importance.

Intended for teachers of biology, and also for those who have an interest in nature study and outdoor life.

Zool. 8 s. *Comparative Vertebrate Morphology* (4)—Two lectures; two laboratories. Prerequisite, Zool. 1 f or s, 2 f, or 5 f.

Required of pre-medical students and of students selecting Zoology and Aquiculture as the principal department in the major group. A comparative study of selected organ systems in some of the classes.

Zool. 12 s. *Normal Animal Histology* (3)—One lecture; two laboratories. Prerequisite, Zool. 1 f or s or equivalent.

This course covers the general field of animal histology and is not restricted to mammalian forms. Thus, although it presents a good background for medical histology, it offers a broad foundation of general histology for the student whose major is zoology. (Number limited to twenty.)

Zool. 15 f. *Human Physiology* (3)—Three lectures. Prerequisite, Zool. 1 f, 1 s, or 3 s.

A lecture and demonstration course for students not selecting Zoology as the principal department in the major group, who desire a knowledge of human anatomy and physiology. Emphasis is placed upon the physiology of digestion, circulation, respiration, and reproduction.

Zool. 16 f or s. *Advanced Comparative Vertebrate Morphology* (2)—Two laboratories. Schedule to be arranged. Prerequisite, Zool. 8 s or its equivalent.

This is a continuation of Zool. 8 s, but will consist of laboratory work only. A maximum opportunity is offered to develop initiative and the spirit of investigation.

For Advanced Undergraduates and Graduates

Zool. 101 f. *Embryology* (4)—Two lectures; two laboratories. Prerequisites, two semesters of biology, one of which should be in this department. Required of three-year pre-medical students and majors in this department.

The development of the chick to the end of the fourth day.

This course, combined with Zool. 8 s, furnishes much of the evidence for organic evolution, and indicates man's place in nature. (Pierson, Burhoe.)

Zool. 102 y. *Mammalian Anatomy* (4-6)—A laboratory course. Prerequisite, one year of zoology.

A thorough study of the gross anatomy of the cat or other mammal. Open to a limited number of students. The permission of the instructor in charge must be obtained before registration. Schedule to be arranged. (Pierson.)

Zool. 103 y. *Journal Club* (2).

Reviews, reports, and discussions of current literature. Required of students selecting Zoology and Aquiculture as the principal department in the major group. (Staff.)

Zool. 104 s. *Animal Physiology* (3)—Two lectures; one laboratory. Prerequisites, one year of chemistry and one course in zoology.

A general and particular study of the phenomena exhibited by animal organisms. Particular stress, both in lecture and in laboratory, is placed upon mammalian and human physiological activity. Registration is limited to 12, and permission of instructor must be obtained before registration. (Phillips.)

Zool. 105 y. *Aquiculture* (4)—Lectures and laboratory to be arranged. Prerequisites, one course in general zoology and one in general botany.

Plankton studies and the determination of other aquatic life of nearby streams and ponds. Morphology and ecology of representative commercial and game fishes in Maryland, the Chesapeake blue crab, and the oyster. (Truitt.)

Zool. 110 s. *Organic Evolution* (2)—Two lectures. Prerequisites, two semesters of biological science, one of which must be in this department.

The object of this course is to present the zoological data on which the theory of evolution rests. The lectures will be supplemented by discussion, collateral reading, and reports. (Pierson.) (Not given every year.)

Zool. 115 y. *Vertebrate Zoology*—Credit hours and schedule to be arranged to suit the individual members of the class. Prerequisite, Zool. 8 s or its equivalent.

Each student may choose, within certain limits, a problem in taxonomy, morphology, or embryology. (Pierson.)

Zool. 120 s. *Genetics* (3)—Two lectures; one laboratory. Prerequisite, one course in general zoology or general botany.

A general introductory course designed to acquaint the student with the fundamental principles of heredity and variation. While primarily of interest to students of biology, it will be of value to those interested in the humanities. Required of students in zoology and aquiculture who do not have credit for Genetics 101 f. (Burhoe.)

Zool. 140. *Marine Zoology*—Credit to be arranged.

* This work is given at the Chesapeake Biological Laboratory, which is conducted co-operatively by the Maryland Conservation Department and the Department of Zoology and Aquiculture, on Solomons Island, where the research is directed primarily toward those problems concerned with commercial forms, especially the blue crab and the oyster. The work starts during the third week of June and continues until mid-September, thus affording ample time to investigate complete cycles in life histories, ecological relationships, and plankton contents. Course limited to a few students, whose selection will be made from records and recommendations submitted with applications, which should be filed on or before June 1st.

Laboratory facilities, boats of various types fully equipped (pumps, nets, dredges, and other apparatus) and shallow water collecting devices are available for the work without extra cost to the student. (Truitt.)

Genetics 101 f. (See page 217.)

For Graduates

ZOOL. 200 y. *Marine Zoology*—Credit to be arranged.
Problems in salt water animal life of the higher phyla. (Truitt.)

ZOOL. 201 y. *The Chordates*—Credit to be arranged.
Minor problems in embryology or anatomy. (Pierson.)

ZOOL. 202 y. *Experimental Zoology*—Credit to be arranged.
Problems in Physiology and related subjects. (Phillips.)

ZOOL. 203 f. *Advanced Animal Histology* (3-5)—Two lectures; one to three laboratories.

Detailed study of the structure and function of animal cells and tissues. Laboratory work consists of the technical methods used in microscopic preparation and examination. Registration limited. Permission of the instructor must be obtained before registration. (Phillips.)

Training in the Zoological sciences is of paramount value to workers in State and Federal Bureaus of Biological Survey, Fisheries, and Animal Industry.

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* The Maryland Conservation Department has erected a permanent and well equipped biological laboratory at Solomon's Island on the Chesapeake Bay for the purpose of conducting research on problems of interest to that department. The University of Maryland will cooperate with the Conservation Department in conducting such research, and also will offer courses there in Zoology and other subjects for both graduates and undergraduates.

BS
PhD
MA
MS
AB

SECTION IV
DEGREES, HONORS, STUDENT REGISTER
DEGREES CONFERRED, 1931

HONORARY DEGREES

CHARLES A. BOSTON, Doctor of Laws

HONORARY CERTIFICATES OF MERIT

WILLIAM FREDERICK GUDE
WILLIAM READING HARVEY
NOAH ARBAUGH

THE GRAUDATE SCHOOL

Doctor of Philosophy PhD

ARTHUR KIRKLAND BESLEY	Dissertation:
B.S. University of Maryland, 1923 M.S. University of Maryland, 1924	"The Effect of Ozone on the Vitamin Content of Cod Liver Oil."
ELLIOTT SANFORD DEGMAN	Dissertation:
B.S. Washington State College, 1928	"The Influence of Nitrogen Fertilizers on the Shipping and Keeping Qualities of Fruits."
LEWIS POLSTER DITMAN	Dissertation:
B.S. University of Maryland, 1927 M.S. University of Maryland, 1929	"Studies on the Corn Earworm."
MARK HUGHLIN HALLER	Dissertation:
B.A. State College of Washington, 1923 M.S. University of Maryland, 1926	"A Study of the Effect of Certain Factors on the Size and Composition of Apples and the Effect of Fruiting on Bud Differentiation."
HERMAN HENRY KAVELER	Dissertation:
B.S. School of Mines, University of Missouri, 1927 M.S. School of Mines, University of Missouri, 1928	"A Study of Promotre Action. The Oxidation of Aniline Sulfate by Hot Sulfuric Acid in the Presence of Copper and Mercury Sulfates."
WILBUR GEORGE MALCOLM	Dissertation:
B.S. University of Maryland, 1922 M.S. University of Maryland, 1924	"A Comparative Study of the Efficiency of Certain Germicides in the Preservation of Biologics."

James Edward McMurtrey, Jr. B.S. University of Kentucky, 1917 M.S. University of Maryland, 1928	Dissertation: "A Comparison of the Deficiency Effects of the Different Essential Elements on the Growth of Tobacco Plants in Solution Cultures."
Daisy Inez Purdy B.A. University of Minnesota, 1924 M.S. University of Minnesota, 1926	Dissertation: "A Study of the Bacteriological Changes produced during the Aging of Cured Hams."
William Carleton Supplee B.S. University of Maryland, 1926 M.S. University of Maryland, 1927	Dissertation: "An Investigation of the Chemical Changes occuring during the Aging of Cured Hams."
John Howard Weinberger, Jr. B.S. Pennsylvania State College, 1928	Dissertation: "The Effect of Various Potash Fertilizers on the Firmness and Keeping Quality of Apples, Peaches and Strawberries."
Benton Bosworth Westfall B.S. West Virginia Wesleyan College, 1925 M.S. University of Maryland, 1929	Dissertation: "Determination of the Standard Electrode Potential of Cobalt."
Howard H. Zimmerley B.S. Pennsylvania State College, 1912	Dissertation: "The Effects of Heavy Applications of Phosphorus on the Inter-relation of Soil Reaction and Growth Metabolism of Lettuce, Beets, Carrots and Snap Beans."

Master of Arts

MA

I. Josephine Hagberg
Henrietta Ruan Halverson
Rexford Bell Hartle
John Zirkle Hottel
Edwin Burton Kelbaugh
Frank Edmund Meckling
Vera Estelle Morrison
Gibbs Myers
Gerald Everett Oliver
Richard T. Rizer
Mark Schweizer
William Burl Thomas

Master of Science

MS

George Watson Algire
Marvin J. Andrews
J. Venceslav Anzulovic
Henry H. Baker
M. Thomas Bartram
Harry Elmer Besley
Louise Wilton Cocke
Theodore Frederick Dozois
Isabel Dynes
William Allen Frazier
Samuel W. Goldstein
Harry Lee Greenberg
Arthur C. Hackendorf
Arthur Bryan Hamilton

Leroy Harlan Hersey
John William Heuberger
David Paul Highberger
Don W. Hookom
Llewellyn H. King
Ruth Charlotte Lawless
L. Lavan Manchey
Ruth Dunbracco Musser
Paul Edwin Nystrom
G. Carlton Oland
Cecil A. Reneger
J. Harvey Roberts
Claire Pinkney Schley
John E. Schueler, Jr.
Emanuel V. Shulman
Joseph R. Spies
Joseph W. Wellington
Donald Hyde Wheeler
Leo Wittes

COLLEGE OF AGRICULTURE

Bachelor of Science

BS

Arthur Montraville Ahalt
William Henry Anderson
Kenneth Worthington Baker
John P. Bewley
*Gerald Albert Biggs
Dorothy Jane Blaisdell
George Clifford Byrd
*Carlos de la Torre Centofante
James William Coddington
*B. Franklin Cox, Jr.
Herbert Smith Cramer
Charles Thomas Dean
Lawrence Elden Downey
Willis T. Frazier
David Russell Henry
Daniel Vernon Holter
Donald Leslie Kline
Paul John Linder
Henry Foltz Long
Arthur Fehl Martin
Elihu C. McFadden
W. Galen McKeever
*Delray Bennett McPhatter
George Austin Miller
Wilmer Hoke Naill
John Ridgely Parks
Robert Lee Pryor
Harold Berkeley Robinson
Hugh Custis Trower
Samuel Theodore Royer, Jr.
James Roland Ward
John Hope Ward
Colonel Charles Willis
Mark Winton Woods

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

BA

James Emanuel Andrews, Jr.
John Thomas Batson
Robert Wade Beall
William Osmond Beck
John Lawrence Bischoff
Victoria A. Bundick
Lillian Edith Bunker
William Humphrey Burhans, Jr.
Joseph D. Cladara
Perry Ward Carman
George Chertkof
Seymour Morton Chideckel
Lawrence Russell Chiswell
John Vincent Colosimo
*William W. Covington
Emilie Carolyn Eisenberg
Benjamin Francis Epstein
Ralph Garreth
Abraham David Gomborov
Charles William Held, Jr.
Harry Clyde Hess, Jr.
Candler Harris Hoffman
*Bolton Movius House
Elgar Sherman Jones

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*Degrees conferred after June, 1931.

Wilbur Arters Jones
Leonard G. Leof
Clarence Wesley Lung
Marian Louisa May
Carl Otis McIntire
*Irene Curtis Mead
Walter Christian Medley
Harry Eldred Milburn
Elizabeth Burns Mims
George Joseph O'Hare
Henry W. Parker
William Henry Scott
W. E. Siddall
Sidney Silverman
Gerald Theodore Snyder
Samuel A. Spector
*Vance Richmond Sullivan
Chester Wells Tawney
James Robert Troth
? May Hatton Truitt
Arley Ray Unger
*Robert Warren Warfel
David Eldrid Wells
Henry James Whiting
James Samuel Wilson
Elizabeth Beall Wittig
Anne E. Wolf

Bachelor of Science

*John Paul Allen
Paul Meredith Ambrose
*Stanley H. Berenstein
Madeline Marie Bernard
Arthur Donald Bowers
*George Edward Burgtorf, Jr.
Simon Duckman
Julius Eisenstark
Frank Anthony Franklin
Robert Pearson Fruchtbaum
Maryvee Glass
William Louis Preston Hartge
Marcus Rankin Hatfield
Robert Barron Havell
Milton Gelernter Hendlich
*Josiah Arnold Hunt
Charles Kimmel
Mary Elizabeth Koons
Samuel Theodore Lemer
William Henry Leyking
Samuel C. Oglesby, Jr.
*Robert Joseph Reedy
Richard Roy Roberts
Harold William Rosenberg
*Benjamin Israel Siegel
*Samuel Jacob Sugar
Mary Ethelwyn Tompkins
Ethel Lawrence Trask
Fletcher Pearre Veitch, Jr.
Fred R. Zimmerman

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

Edwin Clark Barnes
Joseph Francis Beyer
Milton Buchbinder
*James Francis Carbone
Reginald William Cline
*Jacob Rubin Cohen
Joseph Anthony Corvino
John Douglas Cross
Owen V. Cummings
Christian Landis Curry
*Jorge de Aldrey
*Charles Somerville Dillon
Wallace Griffiths Drumheller
James Arnone Durso
Douglas Arthur Edwards
Albert Carl Eskin
L. Werner Fetter
Samuel Fornarotto
*M. B. Friedman
Alex E. Gilfoyle
Edgar Gunther
William Edward Hahn
Lloyd Mehrl Hamilton
Carlos G. Icaza

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*Degrees conferred after June, 1931.

Russell Paul Kiker
*Arthur Arnold Kohn
Allan Morris Lankford
Anthony P. Laureska, Jr.
Raymond Edward LaVallee
*Samuel Finling Leichter
Jacob Levin
Gordon Alexander Lewis
Clarence Elmer Margeson, Jr.
*Herbert Margolies
Harry Knox Markley
Walter R. Minahan
Max Nirenberg
Ernest Brodey Nuttall
Frederick H. Peddie
*Carl R. Pierce
Edgar Billingsley Reese
Henry E. Rostov
*Joseph S. Santillo
Clarence Ervin Saunders
Emanuel Shapiro
Frederick Francis Smyth
Elwood Stanley Snyder
George H. Solomon
Julius Sucoff
Jasper Jerome Tew
Harold J. Tracy
J. Daniel Wasilko
Harry James Winner
L. Edward Wojnarowski

COLLEGE OF EDUCATION

Bachelor of Arts

Eleanor Natalie Baumel
Virginia Doreth Blount
Vonnie Lenore Blount
Virgil Leona Brown
Marion Janney Charlton
Melvin Harrison Derr
Margaret Regis Dunnigan
Ruth Marion Finzel
Jane Eleanor Hammack
*Mary Grace Hanna
Margaret Dunbar McGarvey
Stella Ewing Payne
Sallie Perrie Robinson
Norma Rowe
Lois Christine Simmonds
Virginia Smith
Dorothy Louise Snyder
Florence Louise Spicknall
Margaret Elizabeth Wade
Kathleen Elizabeth Wolfe

Bachelor of Science

John Joseph Bremen, Jr.
Gladys Marie Bull
Samuel Preston Caltrider
Dora Frances DeBoy
Doris Ponemah French
Mable Louise Gall
Florence Adelaide Gray
Emily Truitt Hawkshaw
Elsie Marie Hill
Robbia Hunt
Eleanor Elaine Knowles
Sydney Taylor Lawler
George Jacob Martin
Henry Schwartz

Teachers' Special Diplomas

Arthur Montraville Ahalt
Kenneth Worthington Baker
Eleanor Natalie Baumel
John P. Bewley
Virginia Doreth Blount
Vonnie Lenore Blount
John Joseph Bremen, Jr.
Virgil Leona Brown
Gladys Marie Bull
Victoria A. Bundick
Samuel Preston Caltrider
Marion Janney Charlton

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*Degrees conferred after June, 1931.

Margaret Elizabeth Cook
Marjorie Virginia Cullen
Dora Frances DeBoy
Melvin Harrison Derr
Lawrence Elden Downey
Ruth Marion Finzel
Doris Ponemah French
Mable Louise Gall
Florence Adelaide Gray
Jane Eleanor Hammack
*Mary Grace Hanna
David Russell Henry
Elsie Marie Hill
Daniel Vernon Holter
Edward F. Holter
Robbia Hunt
Wilbur Arters Jones
Anna Elizabeth Kirkwood
Eleanor Elaine Knowles
Jane Antoinette LaMotte
Sydney Taylor Lawler
Arthur Fehl Martin
George Jacob Martin
Margaret Dunbar McGarvey
*Delray Bennett McPhatter
George Austin Miller
Elizabeth Burns Mims
Wilmer Hoke Naill
Gladys Marie Oberlin
Stella Ewing Payne
Robert Lee Pryor
Sallie Perrie Robinson
Norma Rowe
Samuel Theodore Royer, Jr.
Gwendolyn Sargent
Henry Schwartz
Lois Christine Simmonds
Virginia Smith
Dorothy Louise Snyder
Florence Louise Spicknall
Margaret Elizabeth Wade
James Roland Ward
John Hope Ward
Colonel Charles Willis
Elizabeth Beall Wittig
Anne E. Wolf
Kathleen Elizabeth Wolfe

Certificates in Industrial Education

Charles G. Barany
William Arthur Filler
Robert L. Smith

COLLEGE OF ENGINEERING

Civil Engineer

Howard Edward Hassler
William Merle Kline
Benjamin W. LeSueur
Frederick Brock Rakemann

Electrical Engineer

George Washington Morrison

Bachelor of Science

Alvan Basford
Graef William Buehm
John R. M. Burger
R. Arnold Burr
Charles F. Cashell
Philip Calvin Cooper
Perry Parker Cowgill
Joseph Harward Deckman
Mario de la Torre Centofanti
Ben Dyer
Niles Grosvenor Falkenstine
Maurice Patterson Flory
Creston Eader Funk
William Renton Gifford
Richard Benoni Gossom, Jr.
James Alexander Gregory

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*Degrees conferred after June, 1931.

Conrad Eugene Grohs
Edwin M. Gue
George Rogers Hargis, III
Lamond Forbes Henshaw
Francis Lafayette Holloway
Robert Charles Horne
Bernard Jones
Alfred George Kibler
John Frederick Kirby
Paul Leo Kushner
James Albert Lee
Gregg Harper McClurg
John H. Mitton
Theodore Alex Mowatt
John Thomas O'Neill
John Webster Pitzer
Harold S. Rhind
William Edwards Roberts
Milton Lewis Seaman
Edgar Haight Swick
George Edward Taylor, Jr.
Garland Sumner Tinsley
Leonard Jernigan Vogel
Charles F. Wilcox
Otto Wildensteiner
Edwin Main Willse

COLLEGE OF HOME ECONOMICS

Bachelor of Science

Harriett Eloise Bishopp
Margaret Elizabeth Cook
Marjorie Virginia Cullen
*Sara Carrie Davis
Winifred Gahan
Felisa F. Jenkins
Mildred Avery Kettler
Anna Elizabeth Kirkwood
Jane Antoinette LaMotte
Marguerite Lea
Miriam Lloyd
Agnes Evans McNutt
Helen Mead
Ruth Louise Miles
Gladys Marie Oberlin
Geraldine Parry
Martha Angeline Robertson
Gwendolyn Sargent
Martha Ross Temple
Marie Evelyn Webster

SCHOOL OF LAW

Bachelor of Laws

Bridgewater Meredith Arnold
Ephraim Morton Baker
Wilson King Barnes
Samuel Bass
Thomas Nichols Biddison
Harry Howard Berman
Maurice Rome Brown
J. B. Randol Carroll
George Atvill Conner
John Berchmans Conway
William Charles Egan
Rhoderick Sugg Joyner
William E. H. Kindley, Jr.
Nelson B. Lisansky
George Louis Lochboehler
Simon Littman
Philip Margolis
Richard Alexander McAllister
Bernard Matthew McDermott
Wilfred Thomas McQuaid
Charles Mindel
James Craik Mitchell
Merrill Graydon Perry
Charles Fulton Rheb
Barney Morton Robbin
Leon Sachs
Sylvan B. Shaivitz
Robert Lee Slingluff, Jr.
Paul Bradley Stevens

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*Degrees conferred after June, 1931.

SCHOOL OF LAW

Certificates of Proficiency

Everett LeRoy Buckmaster
James Hazlitt Dorsey
Donald Rothrock Schellhase

SCHOOL OF MEDICINE

Doctor of Medicine

Philip Adalman
Howard Stanley Allen
David Holmes Andrew
Thomas Morrison Arnett
Beatrice Bamberger
Paul Canfield Barton
Eugene Irving Baumgartner
Henry Irving Berman
William Carroll Boggs
Arthur Talbott Brice
Bernard Brill
John L. Brill
Roy Lee Cashwell
Kenneth Lee Cloninger
Eli Contract
Melvin Booth Davis
William Maddren Dawson
Bernard W. Donohue
Joseph Francis Drenga
Harry Eckstein
John Wesley Edel, Jr.
David Eisenberg
R. Cooper Ernest
Samuel Feldman
Arthur S. Feuer
Ruth Foster
Joseph Friedman
Isadore Karl Grossman
Donald Birtner Grove
Rachel Krebs Gundry
Marvin Ray Hannum
Joseph William Harris
Raymond F. Helfrich
Reuben Hoffman
Mark Buckner Hollander
Kent Maidlow Hornbrook
Samuel Maurice Jacobson
Frank H. Jaklitsch
Carl Dana Fausbol Jensen
Page Covington Jett
Arthur Ford Jones
Abraham Karger
Max Kaufman
Walter Joseph Keefe
Albert Kermisch
John Frank Kilgus, Jr.
Walter Kohn
Jerome Leon Krieger
Michael Krosnoff
Harry Lachman
Harry Vernon Langeluttig
Alston Gordon Lanham
Philip F. Lerner
Sidney Starr Leshine
David Robert Levine
Paul Lubin
Edgar Wade Mahan
Desiderius George Mankovich
Thomas Adrian Martin
John Henry Francis Masterson
Leo Martin Meyer
Clarence Fisher Morrison
Waldo B. Moyers
Richard Lawrence Murphy
Francisco P. Nochera, Jr.
Leo Soloman Palitz
Walter Owen Rehmeyer
John Peter Rhoads
Manuel R. Rodriguez y Ema
Robert Franklin Rohm
Benjamin B. Rosenberg
John Karol Rozum
William Merven Seabold
Emmanuel Aloysius Schimunek
Herman H. Seidman
Christopher Campbell Shaw
Harry Sandberg Shelley
Albert Joshua Shochat
Arthur George Joseph Siwinski
Michael Skovron, Jr.

Marvin Longworth Slate
Alexander Slavcoff
Solomon Smith
Milford Harsh Sprecher
Susanne Sterling
Russell Alvin Stevens
Robert Bruce Taylor
William Alfred Van Ormer
Edward William Warren
Harold Carter Whims
Henry Wigderson

SCHOOL OF NURSING

Graduate in Nursing

Margaret Louise Bennet
Doris Louise Bodmer
Annie Irene Bond
Dorothy Mae Bolton
Elizabeth Waters Brown
Evelyn Ruth Click
Evelyn Annette Conner
Marie Olga Cox
Erma Irene Ervin
Margaret J. Goodell
Margaret Boone Groomes
Edna S. Hales
Marion Claudia Hall
Helen Roselyn Helsby
Elizabeth Virginia Heritage
Florence Rowe Horsman
Elton Louise Langford
Louise Davis Martin
Mildred Viola Mills
H. Edith Nesbitt
Lillian Charles Noble
Vivian Frances Reiblich
Rowena Georgia Roach
Elsie Haynes Sills
Ardean Lucia Smith
Josephine A. Toms
J. Virginia Williams
Hulda Vane Wood

SCHOOL OF PHARMACY

Graduate in Pharmacy

Edward J. Alessi
Daniel Stanley Barke
A. Louis Batalion
Ben Beitler
Henry Alison Briele
W. Lester Brunnett
Jessie Cantor
Frieda Carton
Morris G. Cohen
Philip Cohen
Edward Francis Cotter
Amelia Carmel DeDominicis
Earl Henry Diehl
Frank C. Dinges, Jr.
Grant Downs, Jr.
Joseph Horace Edelstein
David Feldman
Lester Fox
Meyer Garfinkel
Benjamin Ginsberg
Frank Glassner
Benjamin Goldblatt
Jaye Jacob Grollman
Joseph Bernard Gross
Bernard Grossman
David Benton Grothaus, Jr.
Aaron Harris
Melvin Lentz Heer
Jeannette R. E. Heghinian
Marvin Webb Henderson
Benjamin Highstein
*Karl Harry Holtgreve
William Howard Hunt
Paul Hyman
Leonard V. Itzoe
Albert Joffe

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*Degrees conferred after June, 1931.

Nancy Emily Kairis
Joseph Katz
Elmer Klavens
Jacob Krakower
Edna Elizabeth Kreis
William Ladensky
Harold Joseph Levin
Max Levin
Charles Joseph McTeague
Anton Charles Marek
Charles Bernard Marek
John Vernon Michel
*Nathaniel Arnold Miller
Sylvia Millett
Raymond Milton Morstein
Benjamin B. Moses
Leon Meyer Newman
Louis Edward Oken
George Dawson Parlett
Nathan Gedaliah Pelovitz
Harry M. Robinson, Jr.
Sara Rodriguez Inigo
Samuel J. Rostov
Sylvan Isadore Rubin
*Walter Thomas Savage
Dorothy Elizabeth Schmalzer
George Frederick Schmitt, Jr.
Charles J. A. Schulte, Jr.
Lea H. Scoll
Virginia Patricia Scott
Arthur Shenker
Louis Lazar Sherman
Gerald Shoben
Milton Siscovick
Sister Mary Carmel Clarke
Sister Mary Rita Spellman
David Smulovitz
Herbert S. Sollod
Bernard Steinberg
George J. Stiffman
David Tourkin
Julius Joseph Tralinsky
John Jacob Wilson
Alvin E. W. Wode
Nathan Wolf
Samuel Wolfovitz
Joseph I. Wollman
Charles L. Young
Anthony J. Zolenas, Jr.

Bachelor of Science in Pharmacy

Joseph Cecil Bernstein
Gustav Edward Cwalina
Amelia Carmel DeDominicis
Jerome Fineman
William Joseph Gildea
Henry Irvin Homberg
Gustav Highstein
*Bernard Lavin
Wallace Henry Malinoski
Carl Jording Meyers
Joseph S. Milan
Stephen J. Provenza
Nathan Racusin
Bertran S. Roberts
David H. Rosenfeld
Samuel S. Rubin
M. Martin Settler
Milton Schlachman
George Schochet
Paul M. Schwartz
Samuel Weisman
*Thomas Gorsuch Wright
Max Morton Zervitz

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*Degree conferred after June, 1931.

MEDALS, PRIZES, AND HONORS, 1931

Elected Members of Phi Kappa Phi, Honorary Fraternity

Arthur Montraville Ahalt
William Henry Anderson
John R. M. Burger, Jr.
Samuel Preston Caltrider
Joseph Harward Deckman
Elliott Sanford Degman
Lewis Polster Ditman
Simon Duckman
Edwin M. Gue
Jane Eleanor Hammack
Robert Barron Havell
Milton Gelernter Hendlich
Elsie Marie Hill
Felisa F. Jenkins
Elgar Sherman Jones
Herman Henry Kaveler
Mary Elizabeth Koons
Marguerite Lea
Henry Foltz Long
Gregg Harper McClurg
James Edward McMurtrey, Jr.
Elizabeth Burns Mims
John H. Mitton
Gladys Marie Oberlin
Marion Wesley Parker
Mark Schweizer
Virginia Smith
William Carlton Supplee
Mary Ethelwyn Tompkins
Joseph W. Wellington
Benton Bosworth Westfall

Citizenship Medal, offered by Mr. H. C. Byrd, Class of 1908
Henry James Whiting

Citizenship Prize, offered by Mrs. Albert F. Woods
Elgar Sherman Jones

Athletic Medal offered by the Class of 1908
Louis William Berger

Maryland Ring, offered by Charles L. Linhardt
Joseph Harward Deckman

Goddard Medal, offered by Mrs. Annie K. Goddard James
Mark Winton Woods

Sigma Phi Sigma Freshman Medal
John Reder Shipman

Alpha Zeta Agricultural Freshman Medals
Warren William Hastings
David Edward Derr

Alpha Upsilon Chi Sorority Medal
Ruth Olive Ericson

Dinah Berman Memorial Medal, offered by Benjamin Berman
Charles Towers Mothersead

Women's Senior Honor Society Cup
Felisa F. Jenkins

The Diamondback Medals

GIBBS MYERS
RUTH LOUISE MILES
ARLEY RAY UNGER

The Reveille Medals

IRVIN OTTO WOLF
MINNA ROZETTA CANNON
HOWARD WILMER GEARY

The Old Line Medals

JAMES EMANUEL ANDREWS, JR.
ARLEY RAY UNGER
ELIZABETH BURNS MIMS
S. CHESTER WARD

"Governor's Drill Cup," offered by His Excellency, Honorable Albert C. Ritchie, Governor of Maryland

COMPANY B—COMMANDED BY
CADET CAPTAIN WILLIAM EDWARD ROBERTS

Military Faculty Award

CADET LIEUTENANT COLONEL HENRY JAMES WHITING

Military Medal, offered by the Class of 1899

CADET SERGEANT MORTON SILVERBERG

Washington Chapter Alumni Military Cup

FIRST PLATOON, COMPANY F—COMMANDED BY
CADET SERGEANT JAMES C. GREELY

University of Maryland Prize (Saber), to the Best Company Commander

CADET CAPTAIN WILLIAM EDWARD ROBERTS

The Scabbard and Blade Saber, to Commander of Winning Platoon

CADET SERGEANT JAMES C. GREELY

The Scabbard and Blade Gold Medals

CADET JOHN M. DICKEY
CADET HARRY T. KELLY

Gold Medals (Military Band)

CADET CORPORAL EDMUND F. YOCUM
CADET CORPORAL LEWIS G. PHILLIPS

Squad Competition Gold Medals

CADET CORPORAL GEORGE O. WEBER
CADET DOUGLAS P. DEVENDORF
CADET WAYNE D. IRWIN
CADET ALBERT E. KANODE
CADET EDWIN N. LAWTON
CADET EDWARD F. QUINN
CADET TALBOT A. SMITH
CADET GEORGE E. SPATES

Inter-Collegiate Third Corps Area Rifle Cup

UNIVERSITY OF MARYLAND R. O. T. C. RIFLE TEAM, COMMANDED BY
CADET CAPTAIN JAMES ROBERT TROTH

Inter-Collegiate Third Corps Area Rifle Silver Medal

CADET GORDON H. LIVINGSTON

Inter-Collegiate Third Corps Area Rifle Bronze Medals

CADET JOHN T. BRUEHL
CADET THOMAS W. COOKE
CADET BENJAMIN H. EVANS
CADET LLOYD F. FISH
CADET RICHARD B. GOSSOM
CADET H. STANLEY HANCOCK
CADET FRED H. MARSHALL
CADET WILLIAM L. SPICKNALL
CADET J. ROBERT TROTH

WAR DEPARTMENT AWARDS OF COMMISSIONS AS SECOND LIEUTENANTS

The Infantry Reserve Corps

JOHN LAWRENCE BISCHOFF
WALTER BONNET
JOSEPH D. CALDARA
PERRY WARD CARMAN
LAWRENCE RUSSELL CHISWELL
B. FRANKLIN COX
WILLIS T. FRAZIER
RICHARD BENONI GOSSOM, JR.
CONRAD EUGENE GROHS
GEORGE ROGERS HARGIS, III
CANDLER HARRISS HOFFMAN
ROBERT CHARLES HORNE
FREDERICK HARNDEN MARSHALL
HAROLD S. RHIND
WILLIAM EDWARD ROBERTS
DAVID ABRAHAM ROSENFELD
JAMES ROBERT TROTH
ARLEY RAY UNGER
HENRY JAMES WHITING
COLONEL CHARLES WILLIS

The Signal Corps Reserve Corps

THEODORE ALEX MOWATT

HONORABLE MENTION

College of Agriculture

First Honors—WILLIAM HENRY ANDERSON, HENRY FOLTZ LONG, ARTHUR MONTRAVILLE AHALT.

Second Honors—JAMES WILLIAM CODDINGTON, MARK WINTON WOODS, DOROTHY JANE BLAISDELL.

College of Arts and Sciences

First Honors—MARY ELIZABETH KOONS, MILTON GELERNTER HENDLICH, ROBERT BARRON HAVELL, MARY ETHELWYN TOMPKINS, SIMON DUCKMAN, ELGAR SHERMAN JONES, ELIZABETH BURNS MIMS.

Second Honors—LILLIAN EDITH BUNKER, MARIAN LOUISA MAY, MARCUS RANKIN HATFIELD, JOSEPH D. CALDARA, HENRY JAMES WHITING, RALPH GARRETH, GEORGE CHERTKOF.

College of Education

First Honors—ELSIE MARIE HILL, VIRGINIA SMITH, SAMUEL PRESTON CALTRIDER.

Second Honors—KATHLEEN ELIZABETH WOLFE, JANE ELEANOR HAMMACK, SYDNEY TAYLOR LAWLER, STELLA EWING PAYNE.

College of Engineering

First Honors—Edwin M. Gue, John R. M. Burger, Jr., Gregg Harper McClurg, Robert Charles Horne.

Second Honors—John H. Mitton, William Edward Roberts, Edgar Haight Swick, James Albert Lee.

College of Home Economics

First Honors—Felisa F. Jenkins, Marguerite Lea.

Second Honors—Gladys Marie Oberlin, Miriam Lloyd.

School of Dentistry

University Gold Medal for Scholarship
Ernest Brodey Nuttall

Honorable Mention

L. Edward Wojnarowski
Clarence Elmer Margeson
L. Werner Fetter
William Edward Hahn
Harold Joseph Tracy

School of Law

Prize of $100.00 for the Highest Average Grade for the Entire Course, Day School,
Bridgewater Meredith Arnold

Prize of $100.00 for the Highest Average Grade for the Entire Course, Evening School,
Bernard Matthew McDermott

Alumni Prize of $50.00 for best argument in Honor Case in The Practice Court,
Donald Rothrock Schellhase

George O. Blome Prizes to Representatives on Honor Case in The Practice Court,

William Charles Egan
Charles Mindel
Wilfred Thomas McQuaid
Donald Rothrock Schellhase

School of Medicine

University Prize—Gold Medal
Samuel Feldman

CERTIFICATES OF HONOR

David Robert Levine
Leo Martin Meyer
Rachel Krebs Gundry
Walter Kohn
Richard Lawrence Murphy

The Dr. Jose L. Hirsch Memorial Prize of $50.00 for the Best Work in Pathology During the Second and Third Years,
Samuel Feldman

The Dr. Leo Karlinsky Memorial Scholarship for the Highest Standing in the Freshman Class,
Max Needleman

The Dr. A. Bradley Gaither Memorial Prize of $25.00 for the best work in Genito-Urinary Surgery during the Senior Year,
Christopher Campbell Shaw

School of Nursing

The University of Maryland Nurses' Alumnæ Association Scholarship to Pursue a Course in Administration, Supervisory, or Public Health Work at Teachers College, Columbia University, to the Student Having the Highest Record in Scholarship,
Marie Olga Cox

The Elizabeth Collins Lee Prize of $50.00 to the Student Having the Second Highest Average in Scholarship,
Elsie Haynes Sills

The Mrs. John L. Whitehurst Prize of $25.00 for the Highest Average in Executive Ability,
Marie Olga Cox

The Edwin and Leander M. Zimmerman Prize of $50.00 for Practical Nursing and for Displaying the Greatest Interest and Sympathy for the Patients,
Louise Davis Martin

The University of Maryland Nurses Alumnæ Association Pin, and Membership in the Association, for Practical Nursing and Executive Ability,
Josephine A. Toms

School of Pharmacy

Gold Medal for General Excellence
Charles Bernard Marek

The William Simon Memorial Prize for Proficiency in Practical Chemistry,
Charles Joseph McTeague

The Charles Caspari, Jr., Memorial Prize ($50.00),
Anton Charles Marek

CERTIFICATES OF HONOR

George Fredrick Schmitt, Jr.
Charles Joseph McTeague

Regimental Organization, R. O. T. C. Unit, 1931-1932

RALPH W. WATT, Lieutenant Colonel, Commanding
JAMES C. GREELY, Jr., Captain, Regimental Adjutant

FIRST BATTALION

LOUIS W. BERGER, Major, Commanding
WILLIAM M. KRICKER, First Lieutenant, Adjutant

	COMPANY "A"	COMPANY "B"	COMPANY "C"	COMPANY "D"
Captains	George F. Openshaw, Commanding	C. Wilbur Cissel, Commanding	Ralph T. Sterling, Commanding	Arthur G. Turner, Commanding
First Lieutenants	Morton Silverberg	Edmund G. Whitehead	Thomas O. Rooney	John W. Hisle
Second Lieutenants	Edward W. Tippett	William F. Lines	Howard L. Stier	

SECOND BATTALION

S. PARKER FABER, Major, Commanding
CARL J. ACKERMAN, First Lieutenant, Adjutant

	COMPANY "E"	COMPANY "F"	COMPANY "G"
Captains	John D. Doerr, Commanding	Raymond W. Koelle, Commanding	Claude H. Smith, Commanding
First Lieutenants	Theodore Bishoff	William L. Spicknall	David S. Miller
Second Lieutenants	Charles E. Miller	Charles P. Reichel	Albert C. Hayden, Jr.

CADET BAND

Band under the direction of Master Sergeant Otto Siebeneichen,
The Army Band, Washington Barracks, Washington, D. C.

Non-Commissioned Officers

FIRST BATTALION

	COMPANY "A"	COMPANY "B"	COMPANY "C"	COMPANY "D"
First Sergeants	R. E. Dunning	H. R. Higgins	W. E. Hauver, Jr.	W. W. Wood
Sergeants	R. A. Linger D. A. Shaffer E. P. Curtin	L. F. Fish R. A. Maxwell A. B. House	C. G. Spicknall J. R. Mitchell G. W. Gienger	S. E. McGlathery J. N. Randolph H. M. Biggs G. O. Weber

SECOND BATTALION

	COMPANY "E"	COMPANY "F"	COMPANY "G"
First Sergeants	H. E. Hasslinger	W. H. Lappen	E. D. Kelly
Sergeants	F. S. Lawless W. C. Needham A. W. Smoot	J. P. Huebsch R. I. Williams L. T. Gravatte	J. B. Harrell J. T. Doyle A. J. Riley

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E. S. Lank
C. G. Cleveland
E. S. Diggs
D. A. Murray
M. H. Gillis
J. R. Shipman

Color Bearers

G. E. Teal
B. A. Sugrue

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COLLEGE OF AGRICULTURE

SENIOR CLASS

Carliss, Ernest A., Windber, Pa.
Clagett, Mary H., Williamsport
Coblentz, Manville E., Middletown
Davis, Herbert L., Jr., Washington, D. C.
Duley, Thomas C., Croome Station
Eby, James W., Sabillasville
Eiler, Charles M., Union Bridge
England, Ralph L., Rising Sun
Etienne, Wolcott L., Berwyn
Fishpaw, Raymond R., Berryville, Va.
Geary, Howard W., Baltimore
Gilbert, Engel L. R., Frostburg
Gilbert, Irwin H., Frostburg
Gray, Harry E., Riverdale
Hanna, Miles, White Hall
Hatton, Rhoda K., Washington, D. C.
Hyson, Harry C., Hampstead
Ingersoll, Mary M., Chestertown
Kindleberger, Elton L., New Windsor
Kricker, William M., Sparrows Point
Lines, William F., Kensington
Marshall, Fred H., Washington, D. C.
Moore, Daniel S., Bishop
Pierpont, Roger L., Woodlawn
Reichel, Charles P., Washington, D. C.
Shriver, Norman J., Emmitsburg
Smith, Max A., Myersville
Spicknall, William L., Hyattsville
Stevenson, James W., Pocomoke City
Stier, Howard L., Oakland
Umstead, Russell A., Dawsonville
Walton, Mary M., Hyattsville

JUNIOR CLASS

Beardsley, Erwin P., Washington, D. C.
Biggs, Willoughby H., Mt. Lake Park
Bishop, J. Tilghman, Carmichael
Burdette, Roger F., Mt. Airy
Callis, Marvin G., Accident
Clay, John W., College Park
Cole, George L., Washington, D. C.
Connelly, George E., Rising Sun
Cowgill, John B., Glendale
Crandall, Bowen S., Chevy Chase
Dean, John P., Ridgely
Dunbar, William H., Little Valley, N. Y.
Duncan, John M., Washington, D. C.
Ensor, John W., Sparks
Ericson, Ruth O., Riverdale
Eyler, Lloyd R., Thurmont
Franklin, John M., Oakland
Gienger, Guy W., Hancock
Gorman, Herman, Washington, D. C.
Hauver, William E., Myersville
Hunt, Dale I., Hyatttsville
Krasausky, John W., Baltimore
Lappen, Walter H., Haddon Heights, N. J.
Lewis, C. Maurice, Lantz
Littleford, Robert A., Washington, D. C.
Lung, Paul H., Smithsburg
Mantilla, Jorge, Ecuador, S. A.
Maxwell, Robert A., Marriottsville
McCann, Wilbur E., Streett
Powell, George, Jr., Princess Anne
Prince, Norman E., Towson
Pugh, Gordon S., Baltimore
Rice, William L., Washington, D. C.
Richardson, Howard D., Willards
Shephard, Josiah, Chevy Chase
Spessard, Ralph K., Smithsburg
Stratmann, George H., Sparrows Point
Tinsley, Selden L., Washington, D. C.
Twilley, Howard J., Washington, D. C.
Wingate, Victor M., Wingate
Yedinak, Alec, Chesapeake City

SOPHOMORE CLASS

Auld, Edward W., Jr., Hyattsville
Baden, John A., Landover
Beall, Wilbur T., Silver Spring
Blood, Frank E., Washington, D. C.
Bush, Paul J., Washington, D. C.
Chase, Spencer B., Riverdale
Clark, John E., Forest Hill
Cotton, John, Chevy Chase, D. C.
Crotty, James F., Towson
Cunningham, Charles H., Deale
Davis, Garnet E., Rocks
Doyle, Vernon T., Baltimore
Hastings, Warren W., Lanham
Havlick, Bernard F., Secretary
Hutchins, John K., Bowens
Jarrett, Beatrice Y., Baltimore
Lohrmann, Arthur, Gambrills
McDonald, James F., Paterson, N. J.
Nicholson, Albert T., Chestertown
Parish, Wesley H., Washington, D. C.
Pfeiffer, Norman B., Laurel
Pielke, Gerald R., Fullerton
Roth, Thomas H., Washington, D. C.
Ruble, Ralph W., Poolesville
Sahlin, Oscar, Annapolis
Shear, Cornelius B., Rosslyn, Va.

Singer, Mildred M., New Brunswick, N. J.
Snyder, Robert G., Hagerstown
Vincent, Rufus H., Hyattsville
Walker, Talbott H., Govans
Wells, Carl H., Jr., Washington, D. C.
Wells, Francis P., Washington, D. C.
White, Richard O., College Park
Wooden, Ernest E., Jr., Reisterstown

FRESHMAN CLASS

Ashton, Donald F., Milford, Del.
Bailey, John W., Aberdeen
Benedict, Frances, Silver Spring
Blaisdell, Albert C., Washington, D. C.
Bunch, Edward L., Washington, D. C.
Burnett, Volney G., Jr., Washington, D. C.
Caskey, Kenneth L., Takoma Park
Chilcoat, William H., Sparks
Clark, Charles E., Chevy Chase
Cox, Clacy C., Gambrills
Dawson, Wilson F., Washington, D. C.
Downey, Fred C., Williamsport
Eiker, Walter M., Washington, D. C.
Evans, Benjamin H., Lonaconing
Fales, John H., Silver Spring
Fisher, Ralph C., Hyattsville
Freeny, James E., Salisbury
Fullerton, Merrill B., Silver Spring
Funk, Harold J., Boonsboro
Garletts, Merle A., Selbysport
Hall, Henry F., Lake Worth, Fla.
Harns, Henry G., Washington, D. C.
Hays, Leonard M., Washington, D. C.
Heyser, Carlton E., Brentwood
Hobbs, Truman A., Glen Echo
Hull, John L., Union Bridge
Hurd, Jesse J., Jr., Chestertown
Johnson, Daniel B., Beltsville
Jones, Omar J., Jr., Princess Anne
Kidwell, Arthur S., Baltimore
Kilroy, Robert J., Washington, D. C.
King, Addison W., Baltimore
King, James S., Germantown
King, William M., Washington, D. C.
Kramer, Ervin J., Baltimore
Leach, Frank J., Washington, D. C.
Lennartson, Roy W., Washington, D. C.
Lewis, Alfred W., Chevy Chase
Litzinger, Charles H., Lutherville
Merryman, Nicholas B., Cockeysville
Moore, LeRoy D., Cascade
Moudy, Samuel M., Mt. Rainier
Myers, William H., Oxford
Neal, Robert W., Hurlock
Ortenzio, Louis F., Steelton, Pa.
Owens, Albert W., Laurel, Del.
Peffer, Francis A., Landover
Poffenberger, Paul R., Smithsburg
Purnell, Robins F., Edgewood Arsenal
Rabbitt, Alton E., Washington, D. C.
Ramsburg, Herman F., Frederick
Richardson, Alfred P., Willards
Rogers, William I., Beltsville
Sebold, Edward W., Mt. Lake Park
Silkman, John A., Baltimore
Slade, Hutton D., Baltimore
Snouffer, James M., Buckeystown
Staley, Joseph L., Knoxville
Stoner, Daniel B., Westminster
Swann, Thomas A., Faulkner
Thomas, E. Eugene, Jr., Frederick
Tydings, Warren E., Davidsonville
Vawter, James H., Laurel
Webster, John W., Pylesville
Wenzel, Marie E., Laurel
Williams, Donald B., Waterbury
Winter, William R., Washington, D. C.
Wintermoyer, John P., Hagerstown

UNCLASSIFIED

Brand, Vance, Washington, D. C.
Brannon, Thelma M., Seattle, Wash.
Bransfield, Joseph D., Owings Mills
Cain, John R., Washington, D. C.
Marbury, Taylor M., Mt. Washington
Morales, Nicolas G., Nicaragua, C. A.
Piquett, Price G., Catonsville
Preston, Leopold, Baltimore

FLORISTS' SHORT COURSE

JANUARY 26-27, 1932

Akehurst, D. Elmer, Fullerton
Akehurst, Jenkins, Govans
Akehurst, Raymond E., Fullerton
Andrews, Albert W., Baltimore
Andrews, Dorothy V., Baltimore
Anspon, B. W., Bladensburg
Babikow, Harry C., Stemmers Run
Ball, George G., West Chicago, Ill.
Barko, Albert J., Baltimore
Balderston, Bertha, Colora
Barthel, Lillian A. (Mrs.), College Park
Bauer, Irvin O., Govans
Bauer, Otto, Washington, D. C.
Bauereis, F., Baltimore
Becker, William S., Washington Grove
Betz, Henry J., Stemmers Run

Bilson, Frank O., Baltimore
Bilson, Frank O. (Mrs.), Baltimore
Blackistone, J. Dan (Mrs.), Washington, D. C.
Blackistone, Shaw, Washington, D. C.
Blandford, J. B., College Park
Blandford, Mildred, College Park
Bogert, J., Salisbury
Bopp, Arthur H., Cumberland
Bopp, Arthur H. (Mrs.), Cumberland
Bowdler, L. L., Washington, D. C.
Bowman, M. H., Harrisonburg, Va.
Boyer, Ruby W. (Mrs.), Riverdale
Bryant, Jennie (Mrs.), Baltimore
Buddington, Arthur (Mrs.), College Park
Buddington, Dorothy, College Park
Burton, Charles G. (Mrs.), Cottage City
Burton, Charles G., Cottage City
Buser, Emma, Baltimore
Byant, Jennie, Baltimore
Carroll, J. (Mrs.), Darby, Pa.
Charron, Arthur, Washington, D. C.
Chenoworth, J. Howard, Glen Arm
Chisolm, Julian J., II, Chevy Chase
Clough, J. T. (Mrs.), Baltimore
Cory, Ernest N., College Park
Cory, Ernest N. (Mrs.), College Park
Cotitton, Lucy B., Baltimore
Cremer, Frank (Mrs.), Hanover, Pa.
Criswell, Robert L., Martinsburg, W. Va.
DeMuth, Charles S., Baltimore
DeMuth, Esabel J., Baltimore
Dent, T. H., Washington, D. C.
Dieckman, Herbert, Wheeling, W. Va.
Donnelly, John H., Philadelphia, Pa.
Donnelly, John H. (Mrs.), Philadelphia, Pa.
Egerton, Oscar C., Glen Arm
Eggers, H. T., Baltimore
Ekas, W. F., Baltimore
Elwell, J., Philadelphia, Pa.
Elkins, F. H. (Mrs.), Fredericksburg, Va.
Engelhaupt, William, Baltimore
Esslinger, Emil C., Philadelphia, Pa.
Evans, Paul W., Hamilton, Va.
Ferguson, J. V., Fredericksburg, Va.
Finger, Anne C., Baltimore
Finger, Helen M., Baltimore
Fischer, Paul, Stemmers Run
Fisher, Louise C., Baltimore
Fisher, Paul, College Park
Francis, Carl G., Towson
Francis, Charles G., Towson
Fraser, Pauline, Upper Marlboro
Garden, William M., Washington, D. C.
Geary, Jerry, College Park
Glen, Janet, Baltimore
Goebel, Elmer G., Washington, D. C.
Goebel, Floyd A., Washington, D. C.
Green, D. H., Boonsboro
Green, Sylvia M. (Mrs.), Mt. Rainier
Greene, Dr. Robert E., Mt. Rainier
Grodzicka, Sophia, Riverdale
Gude, Ernest, Washington, D. C.
Gude, Granville, Washington, D. C.
Gude, Granville (Mrs.), Laurel
Guttemacher, Dorothy, Baltimore
Halliday, John D. (Mrs.), Baltimore
Halliday, Robert (Mrs.), Baltimore
Hannigan, M. J., Pikesville
Hansen, L. A., Takoma Park, D. C.
Hansen, Marjorie, Takoma Park
Harvey, Edgar L., Frostburg
Hauge, Andrew, Fairmont, W. Va.
Hauge, Andrew (Mrs.), Fairmont, W. Va.
Heiss, Charles, Baltimore
Herring, Wilbur L., Baltimore
Hetherington, J. Harper, Washington, D. C.
Jenkins, C. K., Anacostia Station, D. C.
Jenkins, C. K. (Mrs.), Anacostia Station, D. C.
Jenkins, Charles K., Suitland
Jenkins, Charles L., Suitland
Jenkins, Charles L. (Mrs.), Suitland
Jenkins, Clifford H., Suitland
Jenkins, Harry T., Suitland
Jenkins, R. L., Anacostia, D. C.
Jenkins, R. L. (Mrs.), Anacostia Station, D. C.
Jenkins, Raymond, Benning Station, D. C.
Johnson, Franklin, Baltimore
Johnson, Franklin W., Baltimore
Johnson, O. M. (Miss), College Park
Johnston, Mary, Baltimore
Johnston, Robert W., Baltimore
Keefe, Mark A., Washington, D. C.
Keefe, Mark A. (Mrs.), Washington, D. C.
Keir, Joseph, Suitland
Keir, William, Pikesville
Kellar, Venia M., College Park
Killian, Harry J., Baltimore
Kirkley, Earle S., Baltimore
Klateman, Bernard, Washington, D. C.
Klein, Harry, Jr., Towson
Klein, L. H. A. (Mrs.), Towson
Klein, L. H. A., Towson
Koehne, Mrs., Silver Spring
Langford, George S., College Park
Lehr, William G. (Mrs.), Brooklyn
Lehr, William G., Brooklyn
Leineweber, Mina (Mrs.), Baltimore
Lemon, John, Richmond, Ind.
Lockner, Bernadine, Baltimore
Longenecker, Mary E., Sparrows Point
Longo, Sam, Alexandria, Va.

Macey, H. T., Glenburnie
Magoon, C. A. (Mrs.), Riverdale
Magoon, C. A., Riverdale
Magsamen, William R., Middle River
Mason, Florence H., Salisbury
McCeney, James P. (Mrs.), Baltimore
McCormack, J. R., Baltimore
McEvay, A. H. (Mrs.), Doylestown, Pa.
McGuire, A. L., Pikesville
McGuire, A. L. (Mrs.), Pikesville
McGuire, Betty, Pikesville
McKissick, W. E., Baltimore
Merritt, Joseph I., Dundalk
Merritt, Joseph I. (Mrs.), Dundalk
Miller, H. W., Winchester, Va.
Mitchell, James, Baltimore
Mohr, John, Whitemarsh
Morrison, George W., Baltimore
Moss, Howard I., Baltimore
Moulden, J. F. (Mrs.), Riverdale
Neuman, J. H., Baltimore
Nicolet, Ben. (Mrs.), Riverdale
Niggel, A. J., Baltimore
Nippor, William A., Baltimore
Norris, Beulah S., Towson
Novak, John, Baltimore
Patterson, H. J., College Park
Patterson, H. J. (Mrs.), College Park
Patterson, R. T., Baltimore
Patterson, R. T. (Mrs.), Baltimore
Pearson, Lewis V. (Mrs.), Clarendon, Va.
Pearson, R. A., College Park
Pearson, R. A. (Mrs.), College Park
Pearson, Vernon, Washington, D. C.
Pennock, J. Liddon, Philadelphia, Pa.
Pennock, S. S., Philadelphia, Pa.
Perry, Eugene A., Elkridge
Perry, E. A. (Mrs.), Elkridge
Pierce, F. H., Philadelphia, Pa.
Ploor, Frank, Suitland
Price, C. W., Towson
Prichard, L. C., Washington, D. C.
Privet, Theodore, Baltimore
Quinn, Ellen, Baltimore
Randolph, J. O., Alexandria, Va.
Richards, Charles F., Washington, D. C.
Richardson, Calvin E., Owings Mill
Rippery, A. S., Chevy Chase, D. C.
Ritter, John A., Baltimore
Roberts, G. A., Washington, D. C.
Romary, Raymond, Glen Rock, N. J.
Schelika, F. von (Mrs.), Atlantic City, N. J.
Schotta, Benjamin, Baltimore
Schrader, A. Lee (Mrs.), College Park
Schaffer, H. J., Baltimore
Shaffer, Clarence J., Washington, D. C.
Shaffer, George C., Washington, D. C.
Shaffer, George C. (Mrs.), Washington, D. C.
Shank, Vernon, Baltimore
Sharper, J. W., Anacostia Station, D. C.
Sharper, William Y., Washington, D. C.
Shaw, S. B., College Park
Shaw, S. B. (Mrs.) College Park
Shelley, W. E., Baltimore
Shinn, L. B. (Miss), College Park
Sieck, Ethel R., Baltimore
Siegwort, Catherine, Jessup
Siegwort, Charles, Jessup
Smith, Anton, Petersburg, Va.
Smith, Catherine, College Park
Smith, Franklin, Petersburg, Va.
Smith, H. P. (Mrs.), Towson
Smith, Lelia, Hyattsville
Songenfrei, A. H., Washington Grove
Spalding, Arthur W. (Mrs.), Silver Spring
Standiford, J. H. (Mrs.), Baltimore
Stevenson, C. (Mrs.), Towson
Stevenson, Thomas C., Towson
Stricklen, Guy M., Govans
Swift, Dorothy L., Washington, D. C.
Swisher, Marguerite (Mrs.), Philadelphia, Pa.
Swishers, Sherman, Philadelphia, Pa.
Symons, T. B., College Park
Symons, T. B. (Mrs.), College Park
Taliaferro, Dr. W. T. L., College Park
Tefke, John, Stemmers Run
Temple, C. E., College Park
Teresi, J. (Mrs.), Alexandria, Va.
Teresi, J., Alexandria, Va.
Thomas, Amelia G., Washington, D. C.
Thomas, R. B., Washington, D. C.
Thurston, A. S., College Park
Thurston, A. S. (Mrs.), College Park
Turner, Edythe M., College Park
Vincent, J. B., Whitemarsh
Vincent, Pikey G., Jessup
Vincent, Richard W., Whitemarsh
Vincent, Stephen W., Whitemarsh
Wagner, C. Harry, Catonsville
Wagner, H. W., Baltimore
Wantz, Earl (Mrs.), Baltimore
Weber, M. H., Clarksburg, W. Va.
Weber, W. H., Clarksburg, W. Va.
Webster, John, College Park
West, Harry W., Anacostia, D. C.
West, J. A., Anacostia, D. C.
West, J. S., Anacostia, D. C.
West, Raymond E., Anacostia Station, D. C.
Wetherald, J. J., College Park
Wetherald, J. J. (Mrs.), College Park
White, Kate, College Park
White, Richard O., College Park

White, Thomas H., College Park
White, Thomas H. (Mrs.), College Park
Wilhide, Leon E., Eccleston
Witmyer, Arthur G. (Mrs.), Sparrows Point
Witt, Henry, Anacostia, D. C.
Wolfe, Willam H. (Mrs.), Baltimore
Yates, H. O., Merchantville, N. J.
Zimmerman, Alfred, Frederick

COLLEGE OF ARTS AND SCIENCES

SENIOR CLASS

Ackerman, William B., Washington, D. C.
Aldridge, William F., Mt. Savage
Allen, John D., Groton, Mass.
Applefeld, Irving, Baltimore
Beachley, Edwin L., Manassas, Va.
Berger, Louis W., Rosslyn, Va.
Blenard, David C., Hagerstown
Brooks, James T., Washington, D. C.
Brown, Ronald F., Washington, D. C.
Butz, Harry P., Washington, D. C.
Cannon, Minna R., Takoma Park
Cissel, C. Wilbur, Washington, D. C.
Clark, Ernest C., Salisbury
Clayton, Harry K., Mt. Rainier
Cohen, Morris M., Hyattsville
Cosimano, Joseph M., Washington, D. C.
Crentz, William L., Washington, D. C.
Cronin, Paul N., Aberdeen
Curtis, Ruth E., Annapolis
Davis, Thomas G., Frostburg
Dezendorf, May, Washington, D. C.
Dixon, D. McClelland, Oakland
Dressel, George L. A., Mt. Rainier
Duvall, Harry M., Landover
Ebaugh, Frank C., Jr., Washington, D. C.
Eby, Herbert O., Washington, D. C.
Engel, Roy D., Washington, D. C.
Fein, Harry, Brooklyn, N. Y.
Ferguson, Harry F., Baltimore
Flook, Meredith A., Burkittsville
Fouts, Charles W., Washington, D. C.
Frankel, J. Nathan, East Orange, N. J.
Goodhart, Rosalie J., Washington, D. C.
Greely, James C., Jr., Gloucester, Mass.
Hammerlund, Don F., Washington, D. C.
Hasson, George B., Aikin
Hayden, Albert C., Washington, D. C.
Hemp, John A., Burkittsville
Henry, John B., Hancock
Herring, Margaret T., Hyattsville
Hersberger, Arthur B., Barnesville
Hisle, John W., Washington, D. C.
Invernizzi, Fred W., Baltimore
Irey, Richard B., Takoma Park, D. C.
Kaplan, Maurice A., Baltimore
Karpel, Saul, New York City, N. Y.
Levy, Louis S., Washington, D. C.
Lewis, William H. B., Waynesburg, Pa.
Luers, Catherine E., Bowie
Luers, M. Virginia, Bowie
Luney, William M., Los Angeles. Calif.
Margerum, Eleanor W., Washington, D. C.
May, Charles A., Washington, D. C.
McCallister, William R., Baltimore
McCoy, Habbart K., Rising Sun
Meyer, Theodore F., Washington. D. C.
Mudd, Mabel F., Philadelphia, Pa.
Murphy, Maurice J., Washington, D. C.
Neff, Thomas B., Washington, D. C.
Neidhardt, John W., Baltimore
Nestor, L. Kathleen, Washington, D. C.
Nevius, Laura M., College Park
Nicholson, Morris J., Dundalk
Norris, John C., Pittsburgh, Pa.
Oberlin, Robert C., Cleveland Heights, Ohio
Openshaw, George F., Washington. D. C.
Pease, Alfred A., Steelton, Pa.
Pyles, C. Elizabeth, Frederick
Reeder, Robert C., Jr., North East
Ronkin, Edward A., Brooklyn, N. Y.
Rooney, Thomas O., Washington, D. C.
Rose, Margaret B., Hyattsville
Rosenstock, Charles G., Ellenville, N. Y.
Rosenthal, Victor, Brooklyn, N. Y.
Ross, Charles R., Hyattsville
Roth, George, Brooklyn, N. Y.
Rugge, Marjorie L., Ridgewood, N. J.
Sadowsky, Irving, North East
Savage, John B., Jr., Baltimore
Savage, John W., Rockville
Schloss, Jerome, Baltimore
Schneider, Louis G., Baltimore
Schramm, Harry B., Cumberland
Settino, Joseph A., Steelton, Pa.
Shank, Mark B., Middletown
Shewbridge, James T., Baltimore
Shure, Ralph G., Takoma Park
Silber, Bernard, Baltimore
Smith, Claude H., Manassas, Va.
Spencer, Oscar L., Washington, D. C.
Stahl, Kenneth Y., Oakland
Stapen, Milton H., Brooklyn, N. Y.
Sterling, Ralph T., Crisfield
Stowell, Robert L., Washington, D. C.
Streett, Harry G., Litchfield, O.
Tompkins, Charles B., Washington, D. C.
Ullrich, James R., Baltimore
Urciolo, Raphael G., Washington, D. C.
Voris, John B., Laurel
Washburn, H. H., Lutherville
Welch, James E., Galena

Wilson, Robert D., Washington, D. C.
Wilson, William K., Chevy Chase
Zabel, Doris M., Washington, D. C.
Zimmerman, Gordon K., Washington, D. C.
Zimring, Joseph G., Brooklyn, N. Y.

JUNIOR CLASS

Baker, Hayward R., Mt. Rainier
Bates, Marion M., Washington, D. C.
Benjamin, Albert J., Salisbury
Bixler, E. Catherine, Capitol Heights
Blechman, Raphael, Mt. Vernon, N. Y.
Bogdanow, Morris, Jersey City, N. J.
Bowen, James E., Stoakley
Bowie, Harry C., La Plata
Brandau, Adam G., Baltimore
Brennan, Alice M., Washington, D. C.
Brewer, Charles A., Rockville
Burka, Irving, Washington, D. C.
Butt, Joseph A., Baltimore
Cairns, Robert S., Jr., Washington, D. C.
Campbell, James A., Hagerstown
Castaldo, Louis F., Bridgeport, Conn.
Clark, Winifred J., Washington, D. C.
Clopper, Robert L., Smithsburg
Connell, Walter A., West Grove, Pa.
Connick, Harvey F., Washington, D. C.
Crawford, Catherine, Baltimore
Cronin, Virginia S., Aberdeen
Crowther, Harold E., Laurel
Curtin, Elmer P., Dundalk
Deehl, Seymour R., Elizabeth, N. J.
DeFelice, M. Theodore, Orange, N. J.
Dement, Richard H., Jr., Indian Head
Dyott, J. Spencer, Easton
Farrington, Helen, Chevy Chase
Feldman, Jerome, Baltimore
Feldman, Philip M., Brooklyn, N. Y.
Fissel, John E., Baltimore
Furgang, Francis E., Cheltenham
Gerber, Charles, Jersey City, N. J.
Gingell, Loring E., Beltsville
Goubeau, Maurice H., Washington, D. C.
Gravatte, Leroy T., Jr., Washington, D. C.
Gregory, Allen E., Seat Pleasant
Gruver, Esdras S., Hyattsville
Hannigan, Elena, College Park
Hardiman, Sannye E., Baltimore
Harrell, Jerome B., Washington, D. C.
Hasenbalg, Catharine, Baltimore
Hebbard, Russell E., Washington, D. C.
Higgins, Richard W., Washington, D. C.
Hines, Frank B., Chestertown
Hochfeld, Leo, New York City, N. Y.
Hoffman, M. Virginia, Hyattsville
House, Arthur B., College Park
Hudson, Robert F., East Haven, Conn.
Keener, Bernard H., Raspeburg
Kelbaugh E. Tilden, Baltimore
Kiernan, Paul C., Washington, D. C.
Knobloch, Howard T., Greensburg, Pa.
Krajcovic, Jesse, Dundalk
Kunkowski, Mitchell F., Baltimore
Lamb, James E., Jr., Kensington
Lanahan, Doris, Laurel
Levin, Julius, Baltimore
Levinson, Leonard, Brooklyn, N. Y.
Little, Henry M., Brunswick
Lovell, Ralph H., Brentwood
Marino, Irene T., Allegany, N. Y.
McCauley, A. Franklin, Baltimore
Miller, John W., Oxon Hill
Miller, Sydney B., Baltimore
Mitchell, Warren C., Washington, D. C.
Mowatt, Marjorie R., College Park
Mullen, Edward J., Jersey City, N. J.
Mullendore, Ralph E., Hagerstown
Needham, William C. H., Washington, D. C.
Newcomer, Edgar B., Washington, D. C.
Nordenholz, Fred A., Baltimore
Pentecoste, Salvador D., Bloomfield, N. J.
Pergler, Carl, Washington, D. C.
Perlman, Lawrence, Baltimore
Plumley, J. Lawrence, Takoma Park
Poppelman, Raymond J., Hollywood, Calif.
Powers, Lawrence J., Frostburg
Randolph, John N., Washington, D. C.
Reuling, Leonard R., Baltimore
Riley, A. Jack, Washington, D. C.
Rill, Woodrow W., Hampstead
Roberts, A. Jack, Berwyn
Rochlin, Narcisse, Baltimore
Rombach, Dorothy S., Dundalk
Roth, John C., Washington, D. C.
Secrist, Ford I., Easton
Seidner, Edward, Belmar, N. J.
Semoff, Milton C. F., Brighton Beach, N. Y.
Shaffer, Donald A., College Park
Simpson, Dorothy E., Chevy Chase
Small, Jeffrey M., Hyattsville
Soloman, Cyril, Baltimore
Somers, Robert G., Crisfield
Sorin, Matthew, Baltimore
Spain, David M., Brooklyn, N. Y.
Spicknall, Charles G., Hyattsville
Spire, Richard H., Washington, D. C.
Statman, Bernhardt J., Newark, N. J.
Stern, Morris H., Passaic, N. J.
Stieber, Frederick, Towson
Sutton, Marion P., Kennedyville
Taterka, Adrian, Grantwood, N. J.
Tippett, Edward W., Washington, D. C.

Toombs, Alfred G., Washington, D. C.
Weinman, Sidney, Baltimore
Welch, Robert G., Galena
Welsh, Thomas H., Jr., Hyattsville
Williams, Ralph I., Washington, D. C.
Yocum, Edmund F., Baltimore
Young, Genevieve K., Washington, D. C.
Yourtee, John A., Stafford, Va.
Wilcox, Fenton C., Takoma Park

SOPHOMORE CLASS

Abarbanel, Milton, Jersey City, N. J.
Adams, John R., Jr., Takoma Park
Allen, Rolfe L., Washington, D. C.
Anderson, Lewis P., Hyattsville
Anderson, Richard P., Mt. Rainier
Asimakes, Charles P., Baltimore
Barenburg, Clara, Baltimore
Baumohl, Louis H., Baltimore
Bieren, Roland E., Baltimore
Blacklock, Sarah R., Bel Alton
Blandford, Alma, College Park
Blumberg, Gilbert B., Baltimore
Bogikes, George W., Washington, D. C.
Botwin, Abe F., Elizabeth, N. J.
Bradley, Helen M., Takoma Park
Brodie, Leo, New York City, N. Y.
Brueckner, Marie E., College Park
Bunke, Dorothea A., Washington, D. C.
Burbage, Stuart J., Glen Burnie
Burdette, Margaret M., Mt. Airy
Burka, Milton M., Washington, D. C.
Buzzard, G. Frederick, Ridgewood, N. J.
Cain, Elizabeth S., Hyattsville
Campbell, William H., Chevy Chase, D. C.
Carpenter, William H., Washington, D. C.
Carroll, Harry D. G., Cambridge
Carter, Harry E., Washington, D. C.
Chappell, Donald W., Washington, D. C.
Cichetti, Licinio, Baltimore
Clark, Joseph B., Orbisonia, Pa.
Clay, Ambrose W., College Park
Coffey, Annie R., Landover
Cohen, Milton J., Washington, D. C.
Cole, Selden D., Silver Spring
Collier, Malcolm V., Williamsport
Collins, Stewart A., Riverdale
Coughlan, Stuart G., Baltimore
Cowherd, William J., Cumberland
Curry, Charles J., Baltimore
Daiker, Russell F., Washington, D. C.
Daniels, Mark, Washington, D. C.
Davidson, Charles R., Washington, D. C.
Deckelbaum, Nathan, Washington, D. C.
Decker, James S., Frederick
Devlin, John J., Boston, Mass.
Dickey, John M., Washington, D. C.
Diggs, Everett S., Baltimore
Dumville, George L., Niagara Falls, N. Y.
Dyer, Harry E., Jr., Havre de Grace
Ebaugh, Irving, Jr., Baltimore
Edlavitch, Samuel L., Washington, D. C.
Edwards, Earl L., Washington, D. C.
Ehle, Elizabeth V., Perry Point
Ellison, Emanuel S., Baltimore
Elvove, Joseph T., Washington, D. C.
Ensor, Ellen F., Sparks
Evans, Doris B., Clarendon, Va.
Every, Robert O., Baltimore
Flanders, Robert H., Washington, D. C.
Fox, Sylvan, Baltimore
Franklin, Mary T., Hyattsville
Gibel, Harry, Capitol Heights
Gillis, Marion H., St. Michaels
Goffin, Herbert, New York City, N. Y.
Goldsborough, T. Alan, Jr., Denton
Gonder, Thomas A., Oakland
Goodyear, Betty A., Riverdale
Grant, Robert H., Washington, D. C.
Grant, Rosalie C., Hyattsville
Greenfield, Harold R., Takoma Park
Greenhow, Catherine E., Washington, D. C.
Griffith, Dorothy, Takoma Park
Gunn, Charles S., Jr., Washington, D. C.
Haas, Charles F., Swedesboro, N. J.
Hala, Mary F., New York City, N. Y.
Hamburger, Herbert D., Baltimore
Harbaugh, Paul W., Jr., Brunswick
Hass, Sidney, Jersey City, N. J.
Herring, Charles E., Jr., Baltimore
Hersberger, Henry G., Barnesville
Hoffman, Louis, Baltimore
Holley, Joseph B., Washington, D. C.
Hollins, Stanley M., Baltimore
Holloway, James P., Washington, D. C.
Holst, Jane M., College Park
Hood, Charlotte W., Mt. Airy
Hoover, William D., Washington, D. C.
Hopkins, Edward D., Stevensville
Horne, William A., Chevy Chase
Howard, Frank L., Hyattsville
Hull, David F., Hagerstown
Irwin, Wayne D., Frostburg
Jackson, Thomas, Berwyn
Jacobs, Audrey E., Washington, D. C.
Jacobson, Nathan, Frederick
Jones, Thomas W., Ridgely
Katz, Lawrence R., Baltimore
Keenan, Charles T., Windber, Pa.
Keil, Robert W., Washington, D. C.
Kennedy, Arthur M., Cumberland
King, Parke L., Germantown
Klingel, Emily E., Baltimore
Knox, Douglas R., Baltimore
Kountz, Robert S., Hagerstown

Kuperstein, Charles B., Washington, D. C.
Lagarde, Ramon, Jr., San Germano, P. R.
Lawrie, Andrew, Jr., Newark, N. J.
Lerch, John J. B., Washington. D. C.
Levine, Leonard W., Hartford, Conn.
Levy, Albert I., Baltimore
Lewis, Charles E., Hagerstown
Lipin, Raymond J., Pasadena
List, Doris K., Baltimore
Littman, Louis, Washington, D. C.
Loizeaux, Alfred M., Towson
Long, Bryant A., Edmondston
Long, William B., Westover
Magill, Charles H., Washington, D. C.
Manekin, Bernard, Baltimore
Manieri, Frank V., Baltimore
Mason, James M., Chevy Chase
Matheke, Otto G., Jr., Newark, N. J.
Matteson, Herbert C., Ho-ho-kus, N. J.
Mattern, John H., Washington, D. C.
Matthews, George H., La Plata
Matthews, John H., Washington, D. C.
Mayhew, John W., Hyattsville
McGann, Theodore, Washington, D. C.
McKnew, Hector C., Jr., Riverdale
McWilliams, John H., Indian Head
Mersel, Milton J., New York City, N. Y.
Meyer, Eleanor L., Ozone Park, N. Y.
Meyer, Milton J., Jamaica, N. Y.
Miles, Walter, Jr., Chevy Chase, D. C.
Mills, Samuel M., Hebron
Monk, John E., Washington, D. C.
Murray, Donald A., Mt. Airy
Myers, Norman F., Edgewood
Naughton, Harold E., Cumberland
Nelson, G. Lois, Washington, D. C.
Nicholson, J. Frank, Chevy Chase
Pashen, Nathan, Hagerstown
Penn, Thomas H., Jr., Glyndon
Physioc, Stephen H., Baltimore
Pitts, Raymond R.. Washington, D. C.
Pollack, Frank L., Brooklyn, N. Y.
Powell, Joseph E., Brookeville
Puncochar, Joseph F., Baltimore
Rafferty, William B., Baltimore
Rasinsky, Hyman, Baltimore
Remark, John F., Hagerstown
Remley, Estelle W., Baltimore
Robertson, James C., Jr., Baltimore
Roney, James A., Jr., North East
Rose, Horace D., Washington, D. C.
Rose, Kenneth F., Washington, D. C.
Roush, Ruth M., Baltimore
Ruland, Louis J., Baltimore
Schall, Richard D., Berwyn
Schnebly, Lewis A., Jr., Clearspring
Schwartz, Adolph, Elizabeth, N. J.
Sclar, Jacob B., Silver Spring
Scott, John W., Jr., Elkton
Seay, Charles P., Washington, D. C.
Shapiro, Abraham, Baltimore
Shaw, Ann B., College Park
Short, Sarah L., Baltimore
Silber, Sam L., Baltimore
Simpson, John G., Chevy Chase
Singer, Ethel M., Ansonia, Conn.
Skrzypkowski, Stanley K., Nanticoke, Pa.
Small, John R., Washington, D. C.
Smith, Hannah, Hagerstown
Smith, Margaret L., Hyattsville,
Smith, Talbert A., Washington, D. C.
Smyrnas, Peter, Washington, D. C.
Sothoron, Norwood S., Charlotte Hall
Spire, Helen E., Mt. Rainier
Stamper, Thelma E., Washington, D. C.
Stotler, Jean E., Dundalk
Sugrue, Bernard A., Washington, D. C.
Suwalsky, Sydney, Hartford, Conn.
Swift, Clifton E., Washington, D. C.
Swigert, Wesley J., Baltimore
Tabler, Homer E., Hancock
Tait, James, Washington, D. C.
Thomas, Elizabeth D., Burnham, Pa.
Tingley, Charles O., Washington, D. C.
Troth, Horace E., Chevy Chase
Tyburski, Francis C., Derby, Conn.
Venemann, Chester R., Riverdale
Venemann. Robert M., Riverdale
Verdgeline, Louis F., Rome, N. Y.
Voris, James C., Laurel
Walker, George, Washington, D. C.
Watkins, Orville R., Hyattsville
Weiss, Henry, Ellenville, N. Y.
Welsh, Llewellyn H., Washington, D. C.
Wherry, Robert L., Elkton
White, S. Cottrell, Baltimore
White, Robert W., Salisbury
Wilson, Helen L., Mt. Rainier
Winkler, Margaret C., Portland, Oregon
Wolf, George F., Baltimore
Yauch, Charles D., Washington, D. C.
Zacek, Frank A.. Webster, Mass.
Zirckel, John H., Baltimore

FRESHMAN CLASS

Allison, Herbert M., Washington, D. C.
Anderson, John B., Washington, D. C.
Appelbaum, Morris, Washington, D. C.
Applefeld, Willard, Baltimore
Archer, Carvil R., Bel Air
Archer, Robert H., Bel Air
Arends, Theodore G., Washington, D. C.
Armiger, Walter H., Beltsville

Arnold, Hubert K., Washington, D. C.
Ashton, John C., Washington, D. C.
Ashton, William C., Milford, Del.
Auerback, Manuel, Washington, D. C.
Baiardo, William, Washington, D. C.
Baird, J. Robert, Darlington
Baldwin, Willis H., Havre de Grace
Ballentine, John D., Mt. Rainier
Beach, Paul L., Washington, D. C.
Bender, Clyde F., Grantsville
Bender, Dorothy, Washington, D. C.
Benesh, Otto, Washington, D. C.
Benjamin, Albert N., Baltimore
Bergen, Patrick R., Washington, D. C.
Blackman, Raymond S., Vienna, Va.
Blanes, Rafael A., Mayaguez, P. R.
Bloom, Morris, Baltimore
Blundell, Mary A., Mt. Rainier
Bonnette. Gordon W., Silver Spring
Bounds, William E., Salisbury
Bourke, Anne R., Washington, D. C.
Bourke, John J., Jr., Washington, D. C.
Bower, Lawrence R., Mt. Rainier
Bozman, William C., Oriole
Brady, Maurice S., Seat Pleasant
Briddell, Thomas H., Crisfield
Brooks, Abraham, Washington, D. C.
Brown, Jerome H., Baltimore
Brueckner, Frederick L., College Park
Brumbaugh, Evelyn R., Washington, D. C.
Buckholtz, William H., Jr., Cumberland
Buckingham, William O., Washington, D. C.
Byers, John G., Lonaconing
Calderwood, William B., Huntington, W. Va.
Campbell, Thomas W., Hagerstown
Cannon, Martha A., Takoma Park
Carey, Ann R., Cambridge
Carozza, Alfred T., Catonsville
Carter, Edward P., Washington, D. C.
Carter, William A., Washington, D. C.
Caspari, Fred W., Riverdale
Cave, Edward F., Washington, D. C.
Cawthorne, George S., Mt. Rainier
Chaney, Joseph, Bristol
Chapman, Hugh B., Washington, D. C.
Charlow, Irene H., Baltimore
Cheston, Harvey J., Jr., Washington, D. C.
Christie, Robert C., Silver Spring
Chumbris, Peter, Washington, D. C.
Clark, Leon T., Washington, D. C.
Coe, Mayne R., Jr., Washington, D. C.
Cohn, Sanford, New York City, N. Y.
Colella, Eugene F., Washington, D. C.
Corwin, Tom P., Washington, D. C.
Crecca, Joseph V., Newark, N. J.
Cross, Chester B., Washington, D. C.
Crossley, George L., Washington, D. C.
Cullen, Richard E., Delmar, Del.
Darrieulat, Henriette, Dickerson
Davidson, Frank J., Washington, D. C.
Dennis, G. Graham, Havre de Grace
Deppish, John R., Spesutia Island
DeVeau, Donald, Chevy Chase
Diener, Jack, Washington, D. C.
Dinkowitz, Hilda J., Norwalk, Conn.
DiStefano, Louis S., Baltimore
Dobson, Scott, Annapolis
Dolly, Woodrow, Cumberland
Donovan, John P., Cristobal, C. Z.
Dorfman, Joseph S., Washington, D. C.
Drake, Lillian, Washington, D. C.
Drape, Fred T., Baltimore
Dronenburg, Jacob W., Washington, D. C.
Dubnoff, Herman, Passaic, N. J.
Dudley, Gordon C., Hagerstown
Duffey, James A., Denton
Duggan, William M., Aberdeen
Dulin, Thaddeus, Washington, D. C.
Dunn, Elsie M., Washington, D. C.
Eaton, Ernest R., Washington, D. C.
Edelson, David, Neptune, N. J.
Edmonds, Ralph M., Hyattsville
Edmondson, Charles E., Cambridge
Ephraim, Irvin M., Brunswick
Epstein, Irving, Lake Placid, N. Y.
Erickson, Karina A., Washington, D. C.
Evans, Henry D., Silver Spring
Evans, Warren R., Bladensburg
Eyler, Millard, Jr., Woodsboro
Farrell, George R., Chevy Chase
Farrell, Hugh G., Metuchen, N. J.
Ferguson, Jean, Baltimore
Fooks, Dewitt H., Snow Hill
Foos, Courtney F., Baltimore
Fox, Harold H., Baltimore
Francis, Robert D., Berwyn
Freedman, Mae A., S. Norwalk, Conn.
Freeland, Foster F., Baltimore
French, Charles T., Frederick
Fuller, Marjorie V., Washington, D. C.
Gaither, Edith R., Landover
Garber, Glenn O., Frederick
Gentner, William G., Washington, D. C.
Gibbs, Emma C., Hyattsville
Goldman, Luther C., Washington, D. C.
Goldstein, Sylvan S., Baltimore
Goudy, Maxon L., Baltimore
Gould, William D., Baltimore
Grady, Percy P., Chevy Chase, D. C.
Graham, James G., Washington, D. C.
Graham, William J., Washington, D. C.
Griffith, Grace C., Washington, D. C.
Grimes, Lawrence G., Washington, D. C.
Gropper, Harry S., Atlantic City, N. J.
Hagan, John, Salisbury
Hancock, Lucile C., Stockton
Hannigan, Kathleen R., College Park

Hardester, Allen S., Crisfield
Harrington, John E., Washington, D. C.
Harris, Hillman C., Washington, D. C.
Harvin, Frances L., Washington, D. C.
Hastings, William G., Salisbury
Hawkins, Charles T., Washington, D. C.
Hawse, Doris V. H., Baltimore
Haydon, Robert L., Jr., Hyattsville
Heimer, Robert B., Berwyn
Hering, Charles E., Takoma Park
Herrell, Sophia E., Mt. Rainier
Higham, Harry W., Washington, D. C.
Hirsch, Anne R., New York City, N. Y.
Hoberman, Reuben, Toms River, N. J.
Hollingsworth, York D., Hyattsville
Holmes, John H., Washington, D. C.
Holmes, Paul E., Washington, D. C.
Horky, John R., Bel Air
Horner, Jack C., Washington, D. C.
Hubbert, Tilghman S., Cambridge
Hughes, Edith M., Washington, D. C.
Hurd, Dorothy A., Washington, D. C.
Jackson, Robert B., Salisbury
Jannarone, Lewis H., Belleville, N. J.
Jeffers, Walter F., Berwyn
Johnson, Jerome H., Washington, D. C.
Jones, Helen, Washington, D. C.
Jones, Margaret E., Baltimore
Jones, William R., Ridgely
Jones, Woodrow W., Cambridge
Kahn, Arthur E., Jersey City, N. J.
Karow, William K., Baltimore
Katzman, Nathan, Washington, D. C.
Kengla, Lewis R., Washington, D. C.
Kerr, Roy H., Hyattsville
Kilroy, Thomas L., Lonaconing
Kitwell, Jeanette B., Washington, D. C.
Kotzin, Jerome L., Waterbury
Kressin, Eugene L., Washington, D. C.
Lane, James F., Jr., Goldsboro
Laney, Arthur R., Jr., Cumberland
Lasky, Saul R., Baltimore
Latterner, Arthur L., Washington, D. C.
Law, Francis E., Washington, D. C.
Lawall, Willard M., Washington, D. C.
Lawder, L. Waggner, Washington, D. C.
Lee, Barbara M., Landover
Lee, Gilbert R., Washington, D. C.
Lee, Zaidie B., Long Branch, N. J.
Lees, Wayne L., Washington, D. C.
Leibold, Edward P., Baltimore
Leizear, P. Dudley, Laurel
Levene, Melville D., New York City, N. Y.
Levinson, Louis, Washington, D. C.
Lipin, Edward J., Pasadena
Lipsitz, Nathan H., Baltimore
Long, Eloise G., Salisbury
Lord, Ruth, Washington, D. C.
Lumpkin, William R., Baltimore
Lutes, Lawrence V., Silver Spring
Lyddane, Eugene T., Washington, D. C.
Lynn, Harry J., Washington, D. C.
Maccubbin, Harry P., Baltimore
MacGregor, Alice G., Hyattsville
Mann, Arthur W., Washington, D. C.
Marche, Louise C., Hyattsville
Marth, Bernard M., College Park
Mason, William H., Jr., Sparrows Point
Mathias, Joseph M., Washington, D. C.
McAboy, Lyman R., Washington, D. C.
McCullough, Benjamin O., Washington, D. C.
McFadden, Roscoe I., Port Deposit
McGann, Robert R., Washington, D. C.
McIntyre, Mynor F., Washington, D. C.
McLain, Edward J., Washington, D. C.
Meiser, Woodrow W., Baltimore
Meyers, Amos I., Baltimore
Michael, Pierce B., Washington, D. C.
Michaelson, Ernest, Bladensburg
Miller, Lucile C., Beltsville
Miller, Mary L., Silver Spring
Milobsky, Louis, Washington, D. C.
Mooers, Malcolm duB., Baltimore
Moore, James M., Waterbury, Conn.
Moore, Staton W., Fruitland
Morgan, Hillen J., Welcome
Morris, Gertrude, Darlington
Mostow, Elmer, Bladensburg
Mudd, John T., Bryantown
Mudd, Paul F., Indian Head
Mumford, Richard D., Willards
Munroe, Clara T., Silver Spring
Nelson, Henry E., Elkridge
Nelson, Richard H., Washington, D. C.
Nevius, Wilford E., College Park
Nichols, Elijah E., Jr., Pikesville
Noble, Wilmer S., Jr., Federalsburg
Nutter, Brenton W., Washington, D. C.
Ockershausen, Richard W., Washington, D. C.
Oland, Charles D., Olney
Onley, Walter T., Girdletree
Peck, Donald E., Damascus
Peck, Robert A., Damascus
Pickels, Thomas H., Jr., Catonsville
Piggott, Willard R., Falls Church, Va.
Pike, James W., Washington, D. C.
Plager, Frank L. M., Washington, D. C.
Polyette, Edward S., Westover
Potts, Virginia L., Baltimore
Powell, Frances K., Brookeville
Pratt, Herbert M., Queenstown
Quirk, Anna M. L., Washington, D. C.
Racoosin, William I., Washington, D. C.
Rakowsky, Charles J., Baltimore
Raw, Clifford B., Washington, D. C.
Records, George M., Buckeystown

Reicher, Sol, Baltimore
Rimmer, Maria I., Riverdale
Rittenhouse, Charles K., Baltimore
Rizzolo, John, Newark, N. J.
Robertson, Benjamin P., Hyattsville
Rochberg, Sam., Passaic, N. J.
Rombro, Leonard, Baltimore
Rosenbaum, Herbert H., Baltimore
Ross, Allen M., Washington, D. C.
Rothkopf, Henry, Ellenville, N. Y.
Rourke, Hugh A., Washington, D. C.
Ruehle, John A., Washington, D. C.
Ruppel, William J., Baltimore
Ruppert, John A., Washington, D. C.
Salganik, Jerome C., Baltimore
Samet, Lester A., Baltimore
Schaaf, Henry Karl T., Ellicott City
Schauman, Albert C., Baltimore
Schrott, Frances A., Washington, D. C.
Scott, Clarence, Baltimore
Scrivener, David S., Washington, D. C.
Seward, Anita K., Overlea
Shapiro, Abe A., Washington, D. C.
Sheppard, Raymond R., Washington, D. C.
Sheriff, Jack B., Landover
Sherr, Joe J., Washington, D. C.
Shulman, Ralph, Stamford, Conn.
Sleman, John B., Chevy Chase
Slocum, Emerson B., Washington, D. C.
Smith, Raymond R., Washington, D. C.
Speck, Marvin L., Middletown
Spiegel, Sidney J., Trenton, N. J.
Spies, Edward R., Washington, D. C.
Stafford, John H., Baltimore
Stallings, Mary L., Washington, D. C.
Stapen, Mannie, New York City, N. Y.
Stelling, Harry E., Hyattsville
Steuart, Mary E., Washington, D. C.
Stonier, Margaret A., Washington, D. C.
Talkes, Walter N., Washington, D. C.
Tartikoff, George, Brooklyn, N. Y.
Taylor, Samuel C., Washington, D. C.
Thomas, Bernard O., Frederick
Thomas, Ramsay B., Towson
Thomas, Robert W., Washington, D. C.
Thomason, Clarence T., Washington, D. C.
Thompson, Winfield L., Rehobeth
Thorne, Clayton T., Silver Spring
Toole, Elizabeth L., Lanham
Towson, Jacquelin C., Washington, D. C.
Treide, Edward C., Baltimore
Van Wyck, Norma, Southold, N. Y.
Vaughan, Frances E., Washington, D. C.
Vemeyer, Paul S., Washington, D. C.
Velenovsky, Joseph J., Baltimore
Vickers, Osbon, Laurel
Vigderhouse, Bernard D., Washington, D. C.
Vignau, John, Washington, D. C.
Wade, Frank B., Port Tobacco
Wantz, Charles D., Hagerstown
Ward, George M., Towson
Warshafsky, Herman, Philadelphia, Pa.
Wasserman, Sidney, Baltimore
Watkins, Lois V., Monrovia
Wayland, Francis W., Washington, D. C.
Webb, Thomas D., Jr., Washington, D. C.
Weirich, William B. Hyattsville
Weisberg, Millard, Baltimore
Weisman, George M., Jr., Baltimore
Weiss, Sybil E., Mt. Vernon, N. Y.
Weist, Bettina M., Washington, D. C.
Wells, William J., Washington, D. C.
Welsh, Walter D., Hyattsville
Werckenthien, Kurt W., Baltimore
West, Berma J., Washington, D. C.
Whalin, James T., College Park
Wharton, John M., College Park
Whitacre, Esther M., Silver Spring
White, Horace R., Annapolis
Wilcoxon, June E., Washington, D. C.
Wilfong, John S., Upper Marlboro
Willey, Edward J., Washington, D. C.
Williams, Ralph C., Washington, D. C.
Wilmeth, Berta E., Brentwood
Wilson, George A., Washington, D. C.
Wilson, Harry T., Baltimore
Winckelmann, Juliet M., Washington, D. C.
Wolf, Sidney, Baltimore
Woods, Charles S., Washington, D. C.
Worthen, Mary A., Mt. Rainier
Worthington, Richard W., Jr., Baltimore
Wyatt, Thomas F., Clarendon, Va.
Young, James M., Washington, D. C.
Yowell, Roy H., Washington, D. C.

UNCLASSIFIED

Armstrong, James B., Dundalk
Darnell, Dorotha M., Clarendon, Va.
Hall, Clifton G., Washington, D. C.
Hendricks, Olive W., College Park
Neuhausen, Nellie, Baltimore
Smith, Herbert D., Takoma Park
Swaine, James W., Jr., Baltimore
Wilson, Margaret, College Park

SCHOOL OF DENTISTRY

GRADUATE STUDENTS

Farnsworth, Ray Eudell, Pendleton, Ore.
Miller, Jesse William, Jr., Washington, D. C.

SENIOR CLASS

Abramson, Isadore, Baltimore
Applegate, Charles Robert, South River, N. J.
Ball, Edward Jenkinson, Paterson, N. J.
Basch, Carl, Lakewood, N. J.
Beamer, Charles Samuel, Cumberland
Berman, Nathan, Jersey City, N. J.
Bessette, Edgar Leo, Providence, R. I.
Boxer, Joseph, Newark, N. J.
Broadrup, Charles Easterday, Frederick
Bryant, Samuel Hollinger, Chester, Pa.
Chandler, Thomas Shirley, Cape Charles, Va.
Cheney, Leon Austin, Auburn, Me.
Coleman, John William, Jersey City, N. J.
Corrigan, John Dennis, Wollaston, Mass.
Dern, Carroll Duttera, Taneytown
Edmonds, Henry Jeter, Kilmarnock, Va.
Emory, Russell, J., Centreville
Englander, Jesse Julius, Bridgeport, Conn.
Farrington, Donald Wilson, Chelmsford, Mass.
Feldblum, Joseph Israel, Chicora, Pa.
Fern, Arthur Louis, Hartford, Conn.
Frankel, Nathan N., Asbury Park, N. J.
Garrett, Raymond Daniel, Waynesboro, Pa.
Gitlin, Joseph Donald, New London, Conn.
Goodkin, Ben, Clifton, N. J.
Graves, Raymond John, New Haven, Conn.
Grosshans, George Thomas, Bridgeport, Conn.
Hergert, Carl Adam, Wilkes-Barre, Pa.
Hill, Edwin Eugene, Elbridge, N. Y.
Hills, Merrill Clarke, Hartford, Conn.
Jennings, Ernest Miller, Hartford, Conn.
Johnston, Hammond Lee, Baltimore
Jones, Ward B., Susquehanna, Pa.
Kania, Joseph Stanley, New Britain, Conn.
Kaplan, Irving, Bayonne, N. J.
Kendrick, Vaiden Blankenship, Charlotte, N. C.
Kendrick, Zebulon Vance, Jr., Charlotte, N. C.
Kershaw, Arthur James, Jr., West Warwick, R. I.
Linder, Norman, Bayonne, N. J.
Lyons, Harry Witherell, Newton, Mass.
MacKenzie, Hector MacDonald, Charlottetown, Prince Edward Island, Canada
Madden, James Elmore, New Market, Va.
Maldonado, Miguel Leon, Ponce, Porto Rico
Manuel, Joseph Robert, Baltimore
Michael, John Hayward, Roanoke, Va.
Milliken, Lyman Francis, Annapolis
Morgan, Tonnie Garmore, Pineville, W. Va.
Muir, Francis, Jr., Arlington, N. J.
Nadal, Alfredo M., Mayaguez, Porto Rico
Newman, Irving, Union City, N. J.
Oliva, Angelo Raymond, Newark, N. J.
Parker, William Edward, Suffolk, Va.
Prather, Richard Bain, Clear Spring
Reid, Harry Mitchell, Lisbon Falls, Me.
Rosen, Ben Louis, Baltimore
Rosenbloom, Reuben, Passaic, N. J.
Sidle, Abraham Frank, Glenburnie
Steigelman, Jay Monroe, Barnitz, Pa.
Theodore, Alfred Edgar, Baltimore
Vajcovec, Joseph Louis, Webster, Mass.
Vezina, George Onesime, Woonsocket, R. I.
Weitzel, Henry Marcus, Carlisle, Pa.
Wickes, Joseph Salyards, New Market, Va.
Wiggins, Albert W., Glenwood Landing, N. Y.
Wilson, Roy McCown, Raphine, Va.

JUNIOR CLASS

Bailey, Richard Anson, Orange, Conn.
Barclay, Robert S., Dry Run, Pa.
Barile, George Michael, Hoboken, N. J.
Bisnovich, Samuel Sidney, Waterbury, Conn.
Black, John Aloysius, Jr., Paterson, N. J.
Block, Philip Leonard, Baltimore
Bloomenfeld, Julius, New York, N. Y.
Bowers, Malcolm Baker, Cape Cod, Mass.
Brener, Herman, Asbury Park, N. J.
Britowich, Arthur, Newark, N. J.
Brotman, Abe Allen, Newark, N. J.
Brown, Morris Edgar, Catawba, W. Va.
Brownell, Dudley Curtis, Pulaski, N. Y.
Chesterfield, Wallace Burton, Newburgh, N. Y.
Clayton, Paul Ramon, Lansdale, Pa.
Clark, William Gilbert, Elizabeth, N. J.
Cook, Albert Cope, Frostburg
Duryea, David Henry, Hawthorne, N. J.
Eskow, Jack Meyer, Perth Amboy, N. J.
Flory, Arlington Ditto, Thurmont
Fruchtbaum, David Pearson, Newark, N. J.
Gaebl, William Louis, Cumberland
Garmansky, Harry Jay, Asbury Park, N. J.
Gillman, Charles, Newark, N. J.
Ginsburg, Aaron Albert, Lakewood, N. J.
Goldiner, Morton Joseph, Baltimore
Goldstein, Lewis, Perth Amboy, N. J.
Gordon, Ralph Jack, Baltimore
Gorsuch, Charles Bernard, Baltimore
Gothers, John Leonard, Hartford, Conn.

Gurvitz, Robert Herbert, Asbury Park, N. J.
Hall, Henry Herbert, Annapolis
Hamilton, Bruce Putnam, Northboro, Mass.
Helfmann, Nathaniel Leonidas, Newark, N. J.
Hoffman, Emanuel, Baltimore
Holter, Paul Wilson, Baltimore
Homel, Samuel H., Baltimore
Horton, Leon Leonard, New Haven, Conn.
Hoy, John Alfred, Shippensburg, Pa.
Hunt, Robert Nathaniel, Lexington, N. C.
Icaza, Jorge, Nicaragua, C. A.
Janowitz, Aaron Jack, Glen Rock, N. J.
Kirschner, William Henry, West Haven, Conn.
Kocis, Joseph Steven, Garfield, N. J.
Kowalski, Walter Joseph, Mocanagua, Pa.
Krasnow, George, Jersey City, N. J.
Kroser, Philip Ralph, Newark, N. J.
Kwan, Amy Hok Wan, Tientsin, China
Leary, Edgar Thomas, Wilmington, Del.
Levine, Alexander, Weehawken, N. J.
Liddy, Martin A., Morristown, N. J.
Lora, Edward James, Union City, N. J.
Lott, Harland Winfield, Forest City, Pa.
McClung, Daryl Smythe, Huntington, W. Va.
McDermott, William Joseph, Pawtucket, R. I.
McGarry, Charles Edward, Baltimore
McGuire, Richard Francis, New Haven, Conn.
McKay, Warren, Hackensack, N. J.
Mansell, Howard C., Maplewood, N. J.
Markowitz, Louis Joseph, New York, N. Y.
Moore, Filbert LeRoy, Baltimore
Nathan, Morris Harry, Hartford, Conn.
Nelson, Leo, Spring Valley, N. Y.
Nussbaum, Milton S., Newark, N. J.
Omenn, Edward, Wilmington, Del.
Ortiz, Jose Aurelio, Costa Rica, C. A.
Paquette, Normand Jean, Woonsocket, R. I.
Piche, Theodore Lionel, Burlington, Vt.
Piombino, Joseph, Jr., Bloomfield, N. J.
Reed, Allen John, Lorraine, N. Y.
Richardson, David Horn, Halethorpe
Rodgers, Clarence John, Baltimore
Rubin, Joseph, Brooklyn, N. Y.
Sandford, Russell Charles, Rutherford, N. J.
Schindler, Samuel Edward, Hagerstown
Schreiber, Jerome Eugene, Newark, N. J.
Schwartz, Cliff, Newark, N. J.
Schwartzkopf, Anton James, Miami Beach, Fla.
Seligman, Leon, Baltimore
Shanahan. James Francis, Bayonne, N. J.
Shulman, Joseph, Weehawken, N. J.
Steinfeld, Irving, Newark, N. J.
Stramski, Alphonse, Danvers, Mass.
Thrall. Ralph B., New Britain. Conn.
Tocher, Robert John, Seymour, Conn.
Todd, Merwin Armet, Beach Haven, N. J.
Toubman, Joseph William, Hartford, Conn.
Trax, Frederick Hiram, Warren, Pa.
Turnamian, Levon Charles, Woodcliffe, N. J.
Waldman, Harold Francis, New Haven, Conn.
Wheeler, Arthur S., Baltimore
Wheeler, George Edmund, Jr., Port Jefferson, N. Y.
Wick, Mahlon Newton, Woodbury, N. J.
Willer, David Herbert, Wilmington, Del.

PRE-JUNIOR CLASS

Aumock, George Harry, Freehold, N. J.
Baker, Myron Spessard, Hagerstown
Biddix, Joseph Calton, Jr., Baltimore
Bimestefer, Lawrence William, Colgate
Blazis, William Francis, Elizabeth, N. J.
Bloom, Theodore, Newark, N. J.
Blumenthal, Hyman, Brooklyn, N. Y.
Browning, Douglas Arthur, Baltimore
Bryant, Elwyn Richard, Jr., New Haven, Conn.
Burns, Donald, Newton Centre, Mass.
Burroughs, Charles Elson, East Orange, N. J.
Butt, Kenneth Lee, Elkins, W. Va.
Caplan, Sylvan, Baltimore
Carhart, Alfred Embrey, Palisade, N. J.
Cofrancesco, Richard Ernest, Waterbury, Conn.
Devine, Lawrence Joseph, Needham, Mass.
Diamond, Leo Lloyd, Long Branch, N. J.
Diani, Anthony John, Clifton, N. J.
Diaz, Ernest Davila, Santurce, Porto Rico
Donovan, Joseph Patrick, Hartford, Conn.
Fallowfield, Harry Wallace, Jr., Chestertown.
Feinstein, Percy, Elizabeth, N. J.
Fisch, Norman Lawrence, Morristown, N. J.
Gillespie, Raymond William, New Haven, Conn.
Glick, Abraham, Elizabeth, N. J.
Gorenberg, Philip, Jersey City, N. J.
Gotthelf, Meyer, Baltimore
Grove, John Pendleton, Roanoke, Va.
Guth, Aaron, Perth Amboy, N. J.
Hamer, Alfred Ernest, Brooklyn, N. Y.

Hanlon, Andrew John, Philadelphia, Pa.
Heaton, Charles Earle, Providence, R. I.
Heefner, Allen, Waynesboro, Pa.
Hirshorn, Abraham, Camden, N. J.
Huang, Gertrude Chun Yen, Tientsin, China
Imbach, William Andrew, Jr., Baltimore
Iuliano, Frank J., Newark, N. J.
Johnson, James Colona, Jr., Cambridge
Josephson, Arthur, Newport, R. I.
Joule, William Robert, Arlington, N. J.
Kurtz, George, Paterson, N. J.
Kwiecien, Walter Howard, Bloomfield, N. J.
Levine, William Milton, New Haven, Conn.
Lilien, Bernard, Newark, N. J.
Liloia, Nicholas, Nutley, N. J.
Maisel, James, New Britain, Conn.
Martin, Ernest Lee, Leaksville, N. C.
Martini, Joseph, Passaic, N. J.
Marchesani, Rosario Pompeo, Newark, N. J.
Maytin, Herbert Sydney, Albany, N. Y.
McLean, Peter Anthony, Trinidad, B. W. I.
McLean, Robert Rettie, Jersey City, N. J.
Mimeles, Meyer, Newark, N. J.
Mullins, Harold Edward, Bridgeport, Conn.
Newman, Herbert Paul, Union City, N. J.
Older, Lester Bernard, Union City, N. J.
Pargot, Aaron, Perth Amboy, N. J.
Pichacolas, Joseph Francis, Tamaqua, Pa.
Raeder, Arthur, Brooklyn, N. Y.
Richardson, Alexander Liles, Leaksville, N. C.
Roberts, Edmund Percy, Roselle, N. J.
Robinson, Frederick Logan, Baltimore
Rockoff, Samuel Charles, Bridgeport, Conn.
Romano, Victor Michael, Bridgeport, Conn.
Ross, Jean Davis, Kearny, N. J.
Russell, Oneal Franklin, Eastport
Russo, Joseph Aloysius, Wilmington, Del.
Rzasa, Stanley Anthony, Chicopee, Mass.
Sabatino, Christian Frank, Scotch Plains, N. J.
Samet, Samuel, Brooklyn, N. Y.
Schunick, William, Baltimore
Shenkman, Max, Brooklyn, N. Y.
Sober, Louis, Baltimore
Taubkin, Milton Louis, Union City, N. J.
Taylor, Howard Greenwood, Frederick
Taylor, Preston Reeves, Mount Holly, N. C.
Thomas, Marvin Richard, Slatington, Pa.
Thompson, Lester Wilson, Fairmont, W. Va.
Timinsky, Abe Harry, Newark, N. J.
Trager, Jesse, Baltimore
Turner, Fred Arnold, Baltimore
Weisbrod, Samuel John, Brooklyn, N. Y.
Woodall, DeWitt Creech, Benson, N. C.
Wycalek, Theodore Lean, Brooklyn, N. Y.
Yablon, Abraham, Atlantic City, N. J.
Yerich, Jack E., Newark, N. J.

SOPHOMORE CLASS

Alt, Louis Paul, Norristown, Pa.
Anderson, Philip Warren, South Portland, Maine
Angalone, John, Baltimore
Beckenstein, Samuel, Norwich, Conn.
Beetham, William Allen, Baltimore
Berkowitz, Joseph B., Baltimore
Bernard, Henry Chandler, Kennett Square, Pa.
Bisese, Pasqual John, Roanoke, Va.
Black, Joseph Heatwole, Paterson, N. J.
Blake, Harris, Paterson, N. J.
Bodnar, John Clarence, Trenton, N. J.
Bonante, John Andrew, Sykesville, Pa.
Boyarsky, William, Passaic, N. J.
Bradshaw, Donald Frederick, New London, Conn.
Bridges, Stanley J., Prospect Harbor, Me.
Caldwell, James Theodore, Springfield, Mass.
Centanni, Alfonse Guide, Newark, N. J.
Charney, Louis Mortimer, Paterson, N. J.
Coroso, Louis Frank, Hartford, Conn.
Craig, Robert James, Wallingford, Conn.
Cross, Gerald Preston, East Rutherford, N. J.
Cuddy, Frederick James, Edgewood, R. I.
Curcio, Emil Louis, Brooklyn, N. Y.
DeKoning, Edward Jay, Wheeling, W. Va.
Denoia, Domenic Anthony, Newark, N. J.
Dionne, Eugene Joseph, New Bedford, Mass.
Donohue, Thomas Van, Toms River, N. J.
Dosh, Stanley Hyde, Baltimore
Dubrovsky, Milton, Stamford, Conn.
Emrich, Harry S., Jr., Baltimore
Eramo, William Stephen, Berkshire, Mass.
Escalona, Rafael, Baltimore
Eye, Kenneth David, Franklin, W. Va.
Feuer, Milton Louis, Kearny, N. J.
Flannery, Michael James, Hudson, N. J.
Freedman, Gerson A., Baltimore
Friedman, Julius William, Bridgeport, Conn.
Friedman, Samuel, Bridgeport, Conn.
Glaser, Isadore, Arverne, N. Y.
Goldberg, Eugene Ashton, Montclair, N. J.
Goldstein, Morris, Philadelphia, Pa.

Golubiewski, Casimer F., Bayonne, N. J.
Gourley, John William, East Braintree, Mass.
Grossman, Nat, Newark, N. J.
Hampson, Robert Edward, Baltimore
Hanik, Samuel, Paterson, N. J.
Harris, Lawrence, Paterson, N. J.
Hartley, Thomas Grant, Baltimore
Hetrick, Bruce Horace, Lewisberry, Pa.
Hills, Clifford Owen, Hartford, Conn.
Hoehn, Samuel Edmund, Oradell, N. J.
Hoffman, Elmer Norman, Baltimore
Hook, Charles Edward Worthington, Riderwood
Houlihan, John Joseph, Torrington, Conn.
Ingber, Jack Isadore, Baltimore
Jorjorian, Arthur David, Providence, R. I.
Kobrinsky, Theodore Taffy, Winnipeg, Canada
Krulewitz, Donald, Passaic, N. J.
Lerner, William, Belmar, N. J.
Levickas, Adolf Thomas, Baltimore
Levinson, Isadore, Baltimore
Mahoney, John Patrick, Tewksbury, Mass.
Markowitz, Aaron Burton, Paterson, N. J.
Marquez, Vernon Bransley, Trinidad, B. W. I.
Michelson, Melvin, Belmar, N. J.
Miller, Edward Theodore, Newark, N. J.
Minkoff, Leo Herbert, Paterson, N. J.
Moon, Robert, East Orange, N. J.
Morris, Samuel, Belmar, N. J.
Morrissey, John Benjamin, Newark, N. J.
Noel, William Woods, Hagerstown
O'Gorman, Allan Aloysius, Nutley, N. J.
Parmesano, Frederick Joseph, Elkins, W. Va.
Pente, Angelo Pasqual, Baltimore
Phillips, Raymond Edward, West Barrington, R. I.
Pittman, Frank R., Linglestown, Pa.
Pridgeon, Charles Taylor, Baltimore
Rivkin, Elmer, Brooklyn, N. Y.
Richardson, Richard Edgeworth, Leaksville, N. C.
Robinson, Milton L., Newark, N. J.
Rosiak, Julian Francis, Baltimore
Rubin, Morris Ellis, New Bedford, Mass.
Sandler, Allen, Newark, N. J.
Sauer, Francis Ambrose, Baltimore
Scanlon, Joseph Henry, Providence, R. I.
Schilling, Alfred Hugo, Carlstadt, N. J.
Seyfert, Ernest Gustave, Stratford, Conn.
Shoben, Gerald, Baltimore
Shulman, Marcy, Weehawken, N. J.
Silverman, Edward, Elizabeth, N. J.
Singer, Isadore Lee, Baltimore
Skoblow, Maurice, West New York, N. J.
Snider, Hansel Hedrick, Keyser, W. Va.
Soja, Richard Alphonse Walter, Fall River, Mass.
Somervell, Gardiner Stanton, Salisbury
Stevens, Richard Andrews, Rutland, Vt.
Stone, Harvey Benjamin, Baltimore
Swain, Brainerd Foster, Newark, N. J.
Wallwork, Edward Wallace, Arlington, N. J.
Whitaker, John Harry, Balboa, Canal Zone

FRESHMAN CLASS

Andreorio, Patrick Louis, Morristown, N. J.
Baker, Edward Keefer, Jr., Pikesville
Baylin, George, Baltimore
Blanchard, Kenneth Earl, Waterbury, Conn.
Brotman, Irwin Norton, Baltimore
Brown, Herbert Samuel, Stamford, Conn.
Buppert, Stuart George, Baltimore
Carulla, David Rafael, Brooklyn, N. Y.
Clewlow, Albert Thomas, Atlantic City, N. J.
Cooper, Herman Milton, Hackensack, N. J.
Corbin, Lance Nathaniel, Bel Air
Cronin, John William, Sparrows Point
d'Argy, Louis Napoleon, Waterville, Maine
Davis, Eugene Burton, Paterson, N. J.
Decesare, William Frank, Providence, R. I.
Deradorian, George David, New Britain, Conn.
Di'Gristine, Michael Joseph, Baltimore
Donohue, Terrence David, Baltimore
Dorsey, George Alfred, Frederick
Drsata, John Joseph, Lansdowne
Epstein, Abe James, Newark, N. J.
Evans, Marvin Ratledge, Clemmons, N. C.
Fischer, William August, Baltimore
Gare, Morris Ralph, Newark, N. J.
George, William Augustus, Matawan, N. J.
Harkins, Charles Edward, Street Post Office
Haynie, Ernest Ward, Lively, Va.
Henry, Edward James, Worcester, Mass.
Hernandez-Borch, Jose, Santurce, Porto Rico
Hodges, Ralph Warren, North Providence, R. I.
Hoff, Henry, Holyoke, Mass.
Horowitz, Morris, East Orange, N. J.
Hunter, Donald Scott, Baltimore
Impresa, Michael, Waterbury, Conn.
Inman, Byron Wallace, Mount Airy, N. C.
Jerome, Bernard, Union City, N. J.

Johnson, Archie Telpher, Benson, N. C.
Johnson, Samuel Burke, III., Dover, N. J.
Kaufman, Vernon Delbert, Carroll Station
Kelley, Howard Lawrence, White Hall
King, Guy Robert, Waynesboro, Pa.
Klotz, Otto Guido, Gloucester, N. J.
Kress, William, Baltimore
Kuta, Bruno Leon, Newark, N. J.
Levine, Emanuel, Baltimore
McCauley, Henry Berton, Jr., Baltimore
Metz, Joseph Francis, Baltimore
Meyer, Everett Nelson, Bridgeport, Conn.
Muller, Frank Harry, Woodbury, N. J.
Musher, Arthur A., Baltimore
Nemeroff, William, Hartford, Conn.
Niebergall, Gerald M., Hackensack, N. J.
Nini, Victor C., Ceiba, Honduras
Orman, Herbert, Baltimore
O'Sullivan, Dennis Edward, Baltimore
Parker, Frank Elmer, Jr., Newtonville, Mass.
Parr, Raymond Francis, Baltimore
Paskell, Ray S., Cumberland
Peeling, Kelvin Andrew, Camp Hill, Pa.
Philpot, William Charles Christopher, Jr., Elizabeth, N. J.
Quillen, Paul Darwin, Ocean City
Riddlesberger, Merklein Mills, Waynesboro, Pa.
Rogers, Everett Tryon, Waterbury, Conn.
Romano, Terry Leonard, Bridgeport, Conn.
Sabloff, Herbert, East Orange, N. J.
Sackett, Sidney Aarron, Bridgeport, Conn.
Schoenbrun, Alexander, Passaic, N. J.
Schwartz, Daniel David, Paterson, N. J.
Shackelford, John Hinton, Beverlyville, Va.
Shipman, Lewis Hamilton, Worcester, Mass.
Titus, Peter Franklin, Watertown, Mass.
Trupp, Garrison, Baltimore
Tully, Edward Albert, West Hartford, Conn.
Walsh, William Thomas, St. Johnsbury, Vt.
Wells, Leon, Pikesville, Ky.
Young, James Edward, Washington, D. C.
Zea, Alvaro, Colombia, S. A.

COLLEGE OF EDUCATION

SENIOR CLASS

Alband, Jo D., Silver Spring
Arnold, Julia C., Brentwood
Babcock, Louise G., Washington, D. C.
Bishop, Doris R., Washington, D. C.
Bixler, Evelyn T., Washington, D. C.
Bowling, Mary B., Newport
Burslem, William A., Hyattsville
Chalmers, George, Newark, Del.
Clemson, Charlotte B., Baltimore
Colborn, W. Hope, Princess Anne
Cooke, Virginia B., Washington, D. C.
Crumb, Mary R., Washington, D. C.
Daiker, Barbara V., Washington, D. C.
Dent, Walter P., Baltimore
Diggs, Ruth E., Catonsville
Doerr, John D., Washington, D. C.
Dunne, Theresa F., Washington, D. C.
Faber, S. Parker, Washington, D. C.
Fitzgerald, Charlotte N., Princess Anne
Greenwood, Ruth E., Washington, D. C.
Hickox, Alma, Washington, D. C.
Holst, Rachel E., College Park
House, James H., Flintstone
Jarrett, Dorothy L., Washington, D. C.
Jones, Hilda, College Park
Karasik, Abe S., Baltimore
Keown, Helen L., Baltimore
Klein, Vera L., Frederick
Lovell, Jeannett E., Brentwood
McCubbin, Frances R., Jewell
Miller, Charles, Baltimore
Miller, Thomas L., Baltimore
Miller, William A., Hagerstown
Myers, Elizabeth C., Hebron
Norton, Elizabeth W., Hyattsville
Oldenburg, Grace M., Hyattsville
Rabbitt, Warren E., Washington, D. C.
Santinie, Maria A., Burtonsville
Sigelman, Harry P., Watertown, S. D.
Stanforth, Elsie V., Mt. Rainier
Stinnette, Edith B., Perry Point
Stone, Margaret G., Port Tobacco
Stull, Robert B., Frederick
Taylor, Charlotte M., College Park
Toulson, Isabelle S., Salisbury
Travers, W. Wayne, Nanticoke
Turner, Georgia R., White Hall
Wilson, W. Sherard, Highland
Wolf, Myra F., Baltimore

JUNIOR CLASS

Brix, Marie L., Bel Air
Brokaw, Sarah K., Rising Sun
Busick, James G., Cambridge
Cash, Bernice B., Washington, D. C.
Cohen, David J., Seat Pleasant
Cranford, Elizabeth V., Washington, D. C.
Easter, A. Elizabeth, Baltimore
Fisher, Mary C., Rockville
Gilbert, Ruth L., Washington, D. C.
Gingell, Agnes L., Berwyn

Hancock, H. Stanley, Dentsville
Hasslinger, Harry E., Baltimore
Hersperger, Louise, Poolesville
Howard, Betty E., Hyattsville
Jones, Elinor I., Prince Frederick
Kenny, Marguerita C., Quogue, N. Y.
Lynham, Lucy A., Berwyn
Maxwell, Anabel D., Marriottsville
Medinger, Mary K., Baltimore
Millison, Solomon B., Baltimore
Mitchell, John R., Baltimore
Owen, Mary E., Lanham
Peter, Florence E., Washington, D. C.
Ream, Vera F., Crellin
Reed, Ruth V., Baltimore
Ricketts, Mary V., Berwyn
Ruff, Helen A., Randallstown
Schmidt, Raymond C., Seymour, Conn.
Shipley, Dorothy B., Westfield, N. J.
Snyder, Lou C., Washington, D. C.
Steffey, Phoebe, Williamsport
Sugar, Sarah F., Washington, D. C.
Symons, Josephine B., College Park
Walter, Joseph E., Cambridge
Warner, Carroll F., Thurmont
Willoughby, Marjorie L., Hurlock
Wood, William W., Washington, D. C.
Woods, Albert W., Kansas City, Mo.

SOPHOMORE CLASS

Alderton, Harold L., Cumberland
Archer, Mary E., Benson
Barinott, Beulah M., Washington, D. C.
Belfield, Lois M., Washington, D. C.
Birckhead, John T., Seat Pleasant
Bishop, Mildred E., Washington, D. C.
Boyd, Rebecca M., Perryville
Cain, John H., Vale Summit
Dennis, Catherine E., Washington, D. C.
Derr, David E., Frederick
Dixon, Clara M., Olivet
Downs, Guy O., Williamsport
Ensor, Charlotte R., Fowblesburg
Eyler, Louise K. E., Baltimore
Feiser, Angela M., Hyattsville
Finzel, Rachel C., Mt. Savage
Hammack, Ernestine A., Washington, D. C.
Hopkins, Dorothy L., Stevensville
Hull, Marie E., Union Bridge
King, Ora H., Clarksburg
Knox, Josephine, College Park
Knox, Irene G., College Park
Leffel, A. Elizabeth, Washington, D. C.
Mann, Carl M., Hagerstown
McLaren, Marjorie B., Branchville
Metcalfe, Verna M., Takoma Park
Neill, Mildred F., Washington, D. C.
Nicholls, Gertrude E., Boyds
Plager, M. Lillian, Washington, D. C.
Quinn, Edward F., Washington, D. C.
Rekar, Eleanor M., Solomons
Rickey, Ruth C., Aberdeen
Saylor, Louise T., Walkersville
Snyder, Ethel, Laurel
Tawes, Mary V., Crisfield
Vincent, Robert L., Seaford, Del.
Webster, Nan, Pylesville
Weitzell, Everett C., Accident
Wolf, William, Washington, D. C.

FRESHMAN CLASS

Allison, Conrad B., Washington, D. C.
Allison, Maurine S., Washington, D. C.
Ashmun, Jean R., Washington, D. C.
Benner, Willis A., Washington, D. C.
Bowen, Gertrude E., Landover
Bremen, Catherine M., Aberdeen
Buscher, Francis A., Washington, D. C.
Clark, William F., Ridgely, W. Va.
Culverwell, Frances C., Washington, D. C.
Dahl, Isobel L., Washington, D. C.
DeMeritt, Laurel M., Washington, D. C.
Dorsey, Margaret F., Baltimore
Downs, Glendora M., Williamsport
Duvall, Maude R., Rockville
Farrell, Albert B., Washington, D. C.
Fenton, Louise E. M., Washington, D. C.
Hamilton, Jean G., Hyattsville
Hannum, Roberta M., Berwyn
Hasson, Eleanor V., Hyattsville
Heintz, Ruth L., Washington, D. C.
Ijams, Elizabeth V., Baltimore
Jarrell, Temple R., Hyattsville
Johnson, Elizabeth R., Anacostia
Klingsohr, Helen F., New York City, N. Y.
Levine, Frank, Washington, D. C.
Love, Robert L., Silver Spring
Lowe, William A., Washington, D. C.
McCaw, Frederick S., Rochester, N. Y.
McCullough, Frances C., Washington, D. C.
McCurdy, David S., Silver Spring
Morrison, M. Evelyn, Seat Pleasant
Moses, Frederick S., Lonaconing
Mulligan, Mary E., Berwyn
Neal, Evelyn L., Hurlock
Nissly, Mildred E., Baltimore
Ordwein, Dorothy L., Hyattsville
Pfluger, Catherine M., Washington, D. C.
Pistel, Lester L., Hyattsville
Pyne, Margaret E., Washington, D. C.
Richardson, Marian E., Seat Pleasant
Rosenfield, Marjorie D., Mt. Rainier
Stinnett, Bernard J., Baltimore

Sudler, Olive W., Baltimore
Terna, Cyril M., Youngstown, Ohio
Townsend, William H., Girdletree
Weigel, Louise E., Berwyn
West, John C., Parkville
Widmyer, Earl G., Hagerstown
Wright, T. Wilbur, Hyattsville

UNCLASSIFIED

Knox, Lloyd T., Jr., College Park
Lloyd, Miriam, Chevy Chase
Martin, Franklin M., Greenmount
Shreve, Adalyn B., Hyattsville
Schutt, Cecil, Takoma Park
Symons, Helen R., College Park

EXTENSION TEACHER-TRAINING COURSES (Baltimore)

(INDUSTRIAL EDUCATION)

Acree, Samuel
Anderson, Charles R.
Arnold, Edward J.
Askew, Howard D.
Ayers, Lewis S.
Baer, Bankard F.
Baker, Allena R.
Balsam, Frank A.
Barany, Charles G.
Bartlett, Cleveland
Beck, Derwood A.
Bell, Raymond E.
Bohrer, Abraham
Boylan, William G.
Brannock, Hazelton A.
Buchman, Thomas W., Jr.
Bull, Edgar M.
Burkert, Claude A.
Cesky, Frank A.
Colbert, Cecile B.
Colburn, Arthur
Collett, Harry A.
Cromack, Joseph T.
Cox, John H.
Crew, Ethel S.
Croddy, Arnold J.
Dalinsky, Isadore J.
Davis, Jacob
DeCesare, Nicholas R.
Dickman, Milton J.
Dietz, Hyman
Donelson, Raymond
Dudderar, Charles W.
Edgar, Lillian S.
Elgert, John E.
Ely, James H.
Filler, William A.
Finnell, L. Catherine
Freimann, Catherine
Gabel, William I.
Gahn, Morris
Galley, Joseph N.
Gardner, Harry K.
Gaver, Mabel B.
Gay, James M.
Gilbert, Loren G.
Giles, Marie L.
Gipe, Ramon D.
Glatt, Bernard
Gleisner, Philip B.
Goldstein, Manuel Q.
Green, Philip W.
Griffin, John T.
Griffith, Jeanette
Groh, Leroy
Gugliuzza, Joseph M.
Haefner, William F.
Haffner, Emanuel B.
Hanna, G. Vernon
Haslup, DeWilton W.
Hennessy, John F.
Hensen, Henry L.
Hoffacker, George W.
Horn, John J.
Horney, Paul A.
Hottes, William
Hubbard, Arthur M.
Hucksoll, William J.
Hunt, Rosalie C.
Hysan, Mary W.
Isabelle, J. Ovide
Jirsa, Charles
Jolly, William H.
Kehm, Marguerite C.
Kirby, Lewis M.
Kornblatt, Joseph
Krausse, Harry W.
Krivitsky, Samuel
Krotee, Samuel L.
Kruse, Lillian O.
Lehr, William E.
Letzer, Joseph H.
Lewis, Paulene A.
Loetell, Robert F.
Lohman, Marguerite
Longley, E. LeRoy
Mahannah, Erwin C.
Mallonee, LeRoy T.
Mattingly, Nellie B.
Manning, Agnes M.
McCaghey, Mildred
McCauley, Everett
McDairmant, John
McGarvey, Maybelle

Melby, Andrew E.
Messick, Carter D.
Meyer, Arthur
Meyers, George A.
Mitchell, Frances M.
Mueller, Joseph
Munschauer, Roy L.
Myers, William
Nachlas, Gertrude
Nathanson, David
Neilson, Julia M.
Neser, Bernard W.
Nice, Elizabeth R.
Norris, Cecil
Packard, Albert G.
Piller, Anna E.
Preis, John G.
Pumphrey, Joseph
Pund, Ruth L.
Raabe, Leroy
Rassa, William J.
Reed, Albert M.
Reiter, Charles L.
Reno, Eston G.
Reuling, Emilie I.
Rich, Bessie A.
Robinson, Harry L.
Rock, Charles V.
Rosendale, Katherine
Sanford, Robert E.
Schmidt, Martha B.
Schowten, Frank
Scott, Charles E. P.
Sendelbach, John F.
Skalski, Elizabeth R.
Smith, Ferdinand C.
Smith, Robert L.
Townsend, Howard E.
VanMeter, Albert R.
Vogel, George P.
Volland, Frederick
Webster, George L.
White, Clinton W.
White, Walter S.
Wiegman, Elgert L.
Willhide, Paul A.
Winter, Ralph A.
Wolfe, Charles
Woodall, Richard C.
Zeller, Elmer K.
Ziefle, Howard E.

COLORED TEACHERS

Addison, Edmund F.
Batson, Thomas E.
Blackwell, Sarah M.
Brown, James A.
Callis, James A.
Carr, Milton J.
Cary, Charles A.
Clark, Lloyd A.
Davis, Lee A.
Gwynn, Charles E.
Gwynn, Lewis M.
Hill, John O.
Jackson, Pearl W.
Johnson, Tazewell A.
Jones, Reuben F.
Lewis, James R.
Long, Oscar W.
Martin, James G.
Moore, Levi V.
Rawlings, W. Cephas
Reavis, Newman B.
Reed, Milton B.
Roberts, Lawrence
Robinson, Vernon L.
Saunders, Everett D.
Smith, Guy W.
Tilghman, John
Traynham, Hezekiah
Washington, Howard E.
Watts, S. Reginald
Wood, John M.
Wyatt, William N.

COLLEGE OF ENGINEERING

SENIOR CLASS

Ackerman, Carl J., Washington, D. C.
Albaugh, Charles R., Frederick
Allen, Robert H., Groton, Mass.
Beall, John R., Washington, D. C.
Bishoff, Theodore, Washington, D. C.
Bogan, Charles W., Washington, D. C.
Bonnet, Walter, Washington, D. C.
Burton, Fred C., Cumberland
Coe, Gerald B., Silver Hill
Cooper, Herbert W., Washington, D. C.
Crump, Charles F., Ballston, Va.
Dorsey, Daniel R., Baltimore
Eskridge, Hazard S., Baltimore
Fellows, Paul D., Washington, D. C.
Fisher, William A., Jr., Baltimore
Gibson, H. Roome, Washington, D. C.
Hamilton, Joseph, Jr., Hyattsville
Harrison, Evelyn, Hyattsville
Hoke, H. Lloyd, Emmitsburg
Kesecker, Kenneth S., Washington, D. C.
Loughran, James E., Swissvale, Pa.
Maloney, Ercell L., Washington, D. C.
McManus, Edward M., Washington, D. C.
Medbery, Aldrich F., Washington, D. C.

Miller, Joseph, Washington, D. C.
Orwig, Robert H., Jr., York, Pa.
Pittaway, Arthur H., Hyattsville
Price, John H., Centreville
Ruhl, George R., Washington, D. C.
Silverberg, Morton, Washington, D. C.
Suter, J. Courtney, Washington, D. C.
Tower, Thurl W., Oakland
Turner, Arthur G., Jr., Takoma Park, D. C.
Walker, Robert M., Washington, D. C.
Walters, Francis P., Cumberland
Ward, S. Chester, Paris
Watt, Ralph W., Washington, D. C.
Whalin, Charles V., Jr., College Park
Whitehead, Edmund G., Washington, D. C.
Williamson, Alfred E., Jr., Laurel
Willingmyre, Daniel W., III, Berwyn

JUNIOR CLASS

Adair, John G., Chevy Chase
Adams, John L., Mt. Rainier
Baldwin, Richard W., Hyattsville
Beer, Louis A., Washington, D. C.
Belt, Norman B., Hyattsville
Berry, Charles H., Landover
Biggs, Howard M., Washington, D. C.
Bixby, Howard M., Washington, D. C.
Blanch, Edgar W., Baltimore
Boger, William B., Washington, D. C.
Bowie, John H., Washington, D. C.
Briddell, Charles D., Crisfield
Burdick, Walter F., Hyattsville
Croghan, John A., Washington, D. C.
Doyle, John T., Washington, D. C.
Dunning, Robert E., Chevy Chase
Eppley, George T., Washington, D. C.
Fish, Lloyd F., Washington, D. C.
Fisher, John T., Washington, D. C.
Fulford, William T., Baltimore
Gambrill, Arthur P., Hyattsville
Haas, Robert T., Washington, D. C.
Hale, Jack E., Towson
Hall, Owen A., Baltimore
Higgins, Horace R., Washington, D. C.
Hockensmith, George L., Pittsburgh, Pa.
Hoffman, Charles G., Annapolis
Holland, Edward S., Jr., Chevy Chase, D. C.
Horton, John, Washington, D. C.
Huebsch, John P., Washington, D. C.
Hughes, Carl R., Kensington
Isemann, Frank E., Washington, D. C.
Jackson, William R., Tilghman
Jones, Lloyd J., Dickerson
Kelly, E. Dorrance, Takoma Park
Kitchin, Charles E., Hyattsville
Koelle, Raymond W., Altoona, Pa.
Lawless, Fred S., Washington, D. C.
Lawrence, Frederick V., Woods Hole, Mass.
Linger, Roland A., Washington, D. C.
Linkins, Wm. Henry, Jr., Washington, D. C.
Lloyd, Richard L., Chevy Chase
Mathews, Howard H., Cumberland
McGlathery, Samuel E., Jr., Washington, D. C.
McIlwee, William A., Washington, D. C.
Melvin, Edward L., Baltimore
Merrick, Charles P., Ingleside
Miller, David S., Washington, D. C.
Mothersead, Charles T., Washington, D. C.
Murdoch, Richard B., Mt. Airy
Norwood, Harold B., Washington, D. C.
Peed, Roger, Washington, D. C.
Phillips, Lewis G., Washington, D. C.
Rahe, Charles H., Baltimore
Read, Neil C., Capitol Heights
Roberts, Lawrence M., Baltimore
Scott, Robert E., Washington, D. C.
Seager, John W., Severna Park
Shinn, Stanley D., Mt. Rainier
Shrewsbury, Edmund P., Upper Marlboro
Smoot, Arnold W., Seaford, Del.
Snell, Dale F., Washington, D. C.
Starr, William P., Riverdale
Stephens, Allen C., Washington, D. C.
Streett, John W., III, Rocks
Weber, George O., Washington, D. C.
Wenger, Frederick J., Washington, D. C.

SOPHOMORE CLASS

Aldridge, James E., Mt. Savage
Bartoo, Donald G., Hyattsville
Bartoo, Edward R., Hyattsville
Beall, George H., Derwood
Beatty, James C., Washington, D. C.
Biglow, Robert P., Washington, D. C.
Bogan, Joseph A., Washington, D. C.
Booth, John E., Ridgewood, N. J.
Bowker, J. Paul, Washington, D. C.
Briscoe, Henry C., Hyattsville
Brooks, John C., Cambridge
Bruehl, John T., Jr., Centreville
Bruggemann, William F., Baltimore
Butterworth, Robert, Washington, D. C.
Chambers, Richmond D., Washington, D. C.
Cleveland, Charles G., Ballston, Va.
Collins, Perez H., Lanham
Cook, Joseph T., Washington, D. C.

Cushen, Edward R., Hagerstown
Cutting, Frederick H., Washington, D. C.
Davis, Denzel E., Baltimore
Devendorf, Douglas P., Washington, D. C.
Diener, Herman M., Washington, D. C.
Dressel, John T., Mt. Rainier
Dye, John C., Washington, D. C.
Ebberts, Edwin E., Elkridge
Edwards, Theodore C., Washington, D. C.
Eyler, Donald W., Thurmont
Fisher, Harry E., Dundalk
Foltz, Charles T., Washington, D. C.
Friedman, Jacob, Washington, D. C.
Gleichman, John D., Cumberland
Graham, James B., Glenndale
Gregory, Carl S., Seat Pleasant
Haas, Charles W., Kensington
Hall, Jonathan, Washington, D. C.
Hammond, Elmer G., Baltimore
Harris, Joseph M., Washington, D. C.
Hay, Donald A., Washington, D. C.
Hazard, James H., Takoma Park
Heironimus, Clark W., Washington, D. C.
Holman, George S., Chevy Chase, D. C.
Hoover, Parks F., Glencoe
Houston, Harold B., Dundalk
Jacobson, Abraham W., New Haven, Conn.
Jenkins, Charles W., Washington, D. C.
Jones, Everette R., Germantown
Kakel, Carroll P., Jr., Towson
Kalmbach, Olin, Washington, D. C.
Kanode, Albert E., Washington, D. C.
Kelly Harry T., Takoma Park
Kent, Edgar R., Baltimore
Kirby, George D., Baltimore
Knight, Richard B., Edgewood
Kreider, David, Lanham
Lake. Archibald M., Jr., Rockville
Lank, Everett S., Washington, D. C.
Lawton, Edwin H., Washington, D. C.
Livingston, Gordon H., Clarendon, Va.
Lore, Stanley C., Washington, D. C.
Lusby, Maurice T., Jr., Prince Frederick
Luthy, William J., Washington, D. C.
Messick, Robert M., Easton
Miller, George M., Baltimore
Morin, Robert L., Hagerstown
Mosher, Howard A., Washington, D. C.
Neale, William F., Jr., Baltimore
Nichols, Vernon R., Federalsburg
Nides, Nicholas G., Centreville
Norris, George W., Jr., Annapolis
Ockershausen, Charles W., Washington, D. C.
O'Hara, W. J., Fort George G. Meade
Pfau, Carl E., Washington, D. C.
Pollock, Jack P., Washington, D. C.
Poole, Robert R., Baltimore
Raab, Carl F., Washington, D. C.
Ralston, George O., Washington, D. C.
Rautanen, Leo W., Sparrows Point
Rohrer, Samuel H., Washington, D. C.
Ross, William H., Jr., Washington, D. C.
Rossi, Raymond J., Raspeburg
Sahlin, Fred E., Annapolis
Shipman, John R., Ballston, Va.
Sonen, Robert W., Washington, D. C.
Steiner, J. William, Washington, D. C.
Stevens, Wilber A., Washington, D. C.
Stottlemyer, John R., Thurmont
Talcott, John W., Washington, D. C.
Tayman, Albert C., Upper Marlboro
Teal, Gilbert E., Pasadena
Thomas, Wm. J., Ednor
Turner, Howard C., Takoma Park, D. C.
VanHorn, Albert C., Jr., Washington, D. C.
Van Reuth, Arthur G., Baltimore
Veirs, Noble L., Silver Spring
Walters, Julian F., Rockville
Webster, Thomas H., III, Baltimore
West, James A., Jr., Anacostia, D. C.
White, Frederick W., Washington, D. C.
White, Jack O., Annapolis
Williams, Lee, Washington, D. C.
Willis, Theodore L., Washington, D. C.
Wilson, Thomas W., Washington, D. C.
Zimmisch, C. Harding, Washington, D. C.

FRESHMAN CLASS

Askin, Leonard, Washington, D. C.
Babcock, Richard E., Jr., Washington, D.C.
Ballentine, Wayne E., Mt. Rainier
Barber, Edward, Washington, D. C.
Bauer, Paul H., Baltimore
Beall, Stewart H., Washington, D. C.
Beane, John R. L., Jr., Washington, D. C.
Bell, Olin C., Easton
Benner, Carl A., Washington, D. C.
Boarman, William F., Hyattsville
Bolz, Alfred R., Riverdale
Booth, Hower T., Jr., Chevy Chase
Boucher, Charles R., Washington, D. C.
Bowers, Lewis L., Hagerstown
Bowers, Paul S., Hagerstown
Bowie, Robert M., Annapolis Junction
Brainin, Herbert, Capitol Heights
Brinkman, William A., Jr., Washington, D. C.
Bronaugh, Alfred T., Washington, D. C.
Brooks, Samuel H., Washington, D. C.
Brown, James W., Washington, D. C.

Browne, Richard B., Kensington
Bryant, Roswell A., Jr., Takoma Park
Burhans, Winslow F., Hagerstown
Burns, Harold J., Washington, D. C.
Burns, Martin E., Towson
Byrd, Harry C., Jr., College Park
Campbell, John W., Washington, D. C.
Capozio, Eugene R., Washington, D. C.
Carlson, John L., Annapolis
Chapman, Ray F., Washington, D. C.
Chick, Henry M., Washington, D. C.
Churchman, Gilpin, Takoma Park
Clardy, Warren D., Washington, D. C.
Cochran, John P., Washington, D. C.
Coleman, Tracy C., Washington, D. C.
Coneby, W. Harold, Washington, D. C.
Conlon, Michael A., Washington, D. C.
Cornell, Edward T., Quantico, Va.
Connery, Edward F., Washington, D. C.
Costinett, John H., Takoma Park
Cronin, Cornelius F., Joppa
Cullimore, Thomas J., Jr., Eastport
Cunningham, David R., Washington, D. C.
Davis, Edwin A., Washington, D. C.
Davis, William D., Frostburg
DeLand, Louis M., Washington Grove
Dinger, Arthur E., Washington, D. C.
Dorman, Edgar A., Washington, D. C.
Duggan, Frank P., Baltimore
Dunnigan, Robert A., Washington, D. C.
Duvall, Marland W., Jessup
Elmore, Lynn B., Washington, D. C.
Evans, John H., Washington, D. C.
Ewin, Robert D., Washington, D. C.
Fakes, Edmond T., Washington, D. C.
Firmin, John M., Washington, D. C.
Fisher, Jesse A., Jr., Annapolis
Flower, Walter C., New Orleans, La.
Flowers, Richard H., Baltimore
Foltz, Daniel M., Hagerstown
Galliher, Joseph H., Jr., Washington, D. C.
George, Philip H., Denton
Gibson, Marston N., Washington, D. C.
Goldman, Julius L., Washington, D. C.
Goodhart, Raymond J., Washington, D. C.
Grosh, Charles G., Cumberland
Hamilton, George H., Capitol Heights
Hanes, George A., Washington, D. C.
Harden, Guy T., Owings Mills
Harmon, William A., Mitchel Field, N. Y.
Harrison, Joseph O., Washington, D. C.
Hartnell, George F., Cheltenham
Hawkins, Frank J., Hyattsville
Heghinian, Garabed W., Baltimore
Hennig, Hugo M., Washington, D. C.
Herold, John A., Relay
Herrell, Everett H., Washington, D. C.
Hitz, John W., Washington, D. C.

Hoffecker, Frank S., Jr., Sparrows Point
Howard, Harry H., Jr., Chesapeake City
Hughes, William D., Washington, D. C.
Humm, John W., Frederick
Hunter, Frank R., Washington, D. C.
Hurd, Donald L., Washington, D. C.
Jarvis, Charles S., Washington, D. C.
Johnstone, Ross B., Washington, D. C.
Jones, Bruce W., Washington, D. C.
Jones, Orlin M., Jr., Washington, D. C.
Joyce, James T., Washington, D. C.
Kang, Bun Po, Takoma Park
Kelleher, Clarence S., Beltsville
Kemper, John M., Jr., Washington, D. C.
Kettler, William J., Washington, D. C.
Kirby, Grover L., Anacostia Station
Knotts, Howard D., Jr., Chestertown
Koenig, William M., Baltimore
Lane, Richard F., Washington, D. C.
Lanham, William B., Jr., College Park
Lank, John C., Salisbury
Lawson, Edmund F., Washington, D. C.
Layman, Ernest M., Frostburg
Leasure, William C., Silver Spring
Light, Clinton G., Capitol Heights
Locraft, James W., Washington, D. C.
Loekle, O. Frank, Glen Ridge, N. J.
Logan, John A., North East
Lowe, Hollis J., Jr., Salisbury
Lozupone, Constantine, Chevy Chase
Ludwig, Charles H., Washington, D. C.
McDonald, John A., Washington, D. C.
Magdeburger, George F., Washington, D. C.
Martin, Ernest, Washington, D. C.
Mason, Samuel, College Park
McGuire, Charles F., Capitol Heights
McMahon, William L., Jr., Washington, D. C.
Merback, John F., Wheatland, Wyo.
Merrick, James F., Glen Ridge, N. J.
Mims, James R., Jr., Luray, Va.
Mitchell, F. Lewis, LaPlata
Moore, George M., Jr., Washington, D. C.
Moorhead, Ellwood S., Washington, D. C.
Morcock, Julius E., Jr., Washington, D. C.
Morris, Charles H., Washington, D. C.
Mossburg, Philip L., Jr., Baltimore
Norris, Joseph V., Baltimore
Osborne, Walt W., Silver Spring
Penrod, Adam J., Washington, D. C.
Peper, Milton C., Stemmers Run
Peratino, George S., Washington, D. C.
Pistel, Ralph R., Hyattsville
Post, Theodore, Chevy Chase
Pyles, Joseph H., Baltimore
Ricketts, Hayden J., Berwyn
Robbins, Jacob W., Cambridge
Roberts, William S., Sudlersville

Robertson, Gordon W., Washington, D. C.
Robinson, Howard O., Baltimore
Rogers, Ralph K., Washington, D. C.
Rosenberger, Albert W., Hagerstown
Roulette, Joseph C., II, Hagerstown
Rouzer, Vaul E., Altoona, Pa.
Ruckman, Norris E., Chevy Chase
Ruffner, Ralph W., Washington, D. C.
Russell, Charles M., Chevy Chase
Sager, John A., Chesapeake City
Schmidt, Henry A., Jr., Capitol Heights
Seibert, Edward T., Jr., Baltimore
Seidenberg, Elijah M., Washington, D. C.
Shankle, Daniel R., Washington, D. C.
Shoemaker, Francis D., Bethesda
Shriver, Clifford W., Emmitsburg
Skidmore, Clinton G., Alexandria, Va.
Skozilas, John W., Baltimore
Smith, Francis E., Jr., Baltimore
Smith, John R., Washington, D. C.

Speer, Sanford T., Washington, D. C.
Starr, John E., Riverdale
Stevenson, Louis V., Jr., Washington, D. C.
Stroup, Spangler G., Myersville
Tarbett, Ralph L., Takoma Park
Thomas, Allan M., Jr., Washington, D. C.
Tindal, Levy R., III, Washington, D. C.
Turnbull, James, Takoma Park
Walker, Franklin L., Washington, D. C.
Walton, Pelham A., Washington, D. C.
Wayson, Morgan W., West River
Welch, Harmon C., Cumberland
Weld, John R., Sandy Spring
Williams, Woodworth S., Washington, D. C.
Woolard, Thomas L., Washington, D. C.
Wright, Dale, Chevy Chase
Wright, Sterling W., Washington, D. C.
Zepp, Edgar W., Clarksville
Zepp, Thomas H., Washington, D. C.
Zimmerman, James F., Frederick

EXTENSION CLASSES IN MINING

CRELLIN CLASS

Ashby, C. E.
Ashby, D. L.
Ashby, D. T.
Ashby, Earnest
Ashby, Glenn
Ashby, Leslie
Ashby, Stanley
Bittinger, Milton
Carskadon, Cletis
Dawson, Harley
DeWitt, Ralph
DeWitt, T. A.
Elliott, E. W.
Ellis, Clyde
Forman, James C.
Gilmore, Glenn
Hayes, Carl
Hayes, J. W.
Henline, T. C.

Henry, J. W.
Hinebaugh, George
Jordan, Kenneth
Lantz, Harold
Lee, Isaac
Lewis, Henry
Murphy, William H.
Roy, E. R.
Roy, S. L.
Sanders, Marshall
Saurers, Ray
Shaffer, H. R.
Sisler, G. S.
Sisler, Wilbur
Smith, C. R.
Smith, Theodore
Welch, Herman
Welch, Ray
Wilt, Harland

KEMPTON CLASS

Armentrout, J. K.
Bowers, Harry
Carbone, Frank
Cassiday, Adam
Corbin, Willard
Costello, John
Harvey, Kenneth
Havran, Paul
Hilton, W. L.
Hoopengarner, George
Jackson, Robert
Kelly, Roy

King, Arthur
Lantz, A. L.
Lewis, Carl
Luzier, Carl
McMannis, Ray
Ryan, Leslie
Sexton, Roy
Steyer, Leon
Turek, Walter
Watring, Ronald
West, Ralph
Wiegratz, Emil
Yankee, Roy

SHALLMAR CLASS

Allen, C. L.
Amtower, Olin
Aronholt, Frank
Brady, John
Brady, Oscar
Clark, Frank
Cummings, George
Feathers, Orville
Hanlin, Harrison
Harvey, Patrick
Iser, N. M.
James, J. B.
Kimble, Baxter
Kimble, Nolan
Lickliter, Donald
Lickliter, George
Lucas, William
Lyons, Melvin
Males, William
Mally, John
Martin, Ray
Marshall, H. A.
Melouse, Frank
McIntyre, C. D.
McKenzie, S. G.
Newhouse, Joseph
Newhouse, Stephen
Parrish, George
Rinker, John
Rosier, Garland
Rosier, Raymond
Shillingberg, J. A.
Shore, Carleton
Turner, Edward
Walker, J. J.
Warnick, Harry G.
Warnick, Russell

VINDEX CLASS

Adams, Frank
Adams, Harold
Arnold, T. A.
Beeman, Fred
Beeman, John
Beeman, Wilbur
Bolyard, Asa
Burton, Henry
Charlton, Sam
Clark, James
Cunningham, Frank
Damon, Frank
Edwards, Harry
Ellifritz, C. F.
Emmert, Forest
Evans, A. D.
Fike, E. W.
Junkins, Jack
Kent, Earnest
Kifer, William
Kitzmiller, Melvin
Knotts, Edgel
Knotts, George
Mackley, Gerald
Mackley, Kenneth
Mackley, Ray
McRobie, Newton
Michaels, Raymond
Moreland, Edgar
Paugh, Earl
Paugh, Homer
Rohrbaugh, Charles
Rhodes, J. A.
Ross, Edward
Sharpless, Glenn
Sharpless, John L.
Sharpless, H. W.
Stewart, Marshall
Stewart, William
Tasker, O. W.
Wolfe, Dennis
White, Joseph

WESTERNPORT CLASS

Bevers, Homer
Bosley, C. W.
Custer, Thomas
Derham, Robert
Ervin, Albert C.
Fazenbaker, Jonas
Guy, Henry A.
Holler, Albert
Hughes, John T.
Jones, Dubois
Jose, William,
Kirk, James F.
Knott, E. G.
Lambert, Earl
Lambert, Francis
Lambert, Wilson
McKenzie, Dayrl
Mellon, Ben
Metcalf, Dewey
Rankin, John
Ross, Russell C.
Smith, Ulysses
Strickler, Joseph
Virts, Earl
Warnick, Clarence
Warnick, John

FIREMEN'S SHORT COURSE

SEPTEMBER 2-4, 1931

Aldridge, E. S., Riverdale
Allison, Harry S., Brentwood
Anders, C. E., Rockville
Baker, Alvin, Hagerstown
Baker, Arch, Frostburg
Baker, W. Ernst, Port Deposit
Bates, A. J., Mt. Rainier
Beall, B., Mt. Rainier
Beall, Clifford, Silver Spring
Beall, Paul E., Mt. Airy
Beall, William R., Hyattstown
Bohler, Marlin T., Hancock
Brenner, P. F., Smithsburg
Brockwell, Sherwood, Jr., Raleigh, N. C.
Brockwell, Sherwood, Raleigh, N. C.
Brown, E. O., Glenn Dale
Brown, Spencer J. H., Sandy Spring
Bryant, Marc, Denton
Burdette, W. L., Hyattstown
Bush, Joseph E., Hampstead
Byers, Robert, Jr., Hancock
Cantler, Preston J., Annapolis
Carbough, Harold F., Hagerstown
Case, Austin, Havre de Grace
Casey, F. P., Mt. Rainier
Cassell, Bernard J., Chevy Chase
Colbert, E. T., Annapolis
Coombs, Ralph J., Hagerstown
Crawford, T. B., Havre de Grace
Disney, W. F., Rockville
Duke, Roland B., Leonardtown
Embrey, Sumpter M., Bethesda
Enderle, Eugene C., Glen Burnie
Farquhar, A. D., Sandy Spring
Fisher, Jesse A., Annapolis
Fowler, Frank, Chestertown
Freeman, William S., Mt. Rainier
Gardner, T. C., Lanham
Gasch, Andrew F., Bladensburg
Geiger, Alfred L., Kensington
Greifenstein, C. V., Manchester
Griffith, George, Glen Burnie
Gummel, George G., Chevy Chase
Hales, Granville, Cambridge
Haller, E. R., Benning, D. C.
Hardesty, Oliver L., Silver Spring
Hartley, William, Bethesda
Harvey, G. B., Bowie
Hopkins, J. Lloyd, Annapolis
Keyes, C. C., Barton
Kneller, C. C., Manchester
Kurtz, Martin G., Jarrettsville
Lamot, Charles, Lanham
Landis, A. N., Hagerstown
Lebowitz, Simon, Mt. Rainier
LeCates, Carl M., Chestertown
Lindsay, George R., Hagerstown
Lingrell, J. T., Anacostia Station
Lyddane, F. S. Rockville
Maisack, Donald W., Hagerstown
Manion, Vernon, Hyattstown
Maschauer, Charles P., Washington, D. C.
McDonnell, H. B., College Park
McPhirson, R. L., Annapolis
Mezzanotte, James, Mt. Rainier
Miles, William T., Greater Capitol Heights
Moore, Clarence E., Mt. Rainier
Moxley, L. V., Brentwood
Neall, Earl M., Glen Burnie
Palmer, William H., Williamsport
Price, Carl, Greater Capitol Heights
Proctor, C. O., Hyattsville
Pyles, Frank, Bethesda
Ricker, Carl L., Chevy Chase
Roberts, Sidney, Annapolis
Rumpf, Robert, Frederick
Sampson, J. E., Brentwood
Savage, Eric A., Washington, D. C.
Schmidt, Lewis R., Hagerstown
Shipley, William N., Williamsport
Shiroky, John J., Severna Park
Simmel, V. A., Cottage City
Smith, J. E., Hagerstown
Springfield, George, Annapolis
Steele, R. F., Frederick
Stewart, F. L., Lanham
Stienberg, Isadore J., Rockville
Tayman, Samuel, Cottage City
Thompson, Leslie B., Rockville
Tierney, William, Bennings
Trott, Charles E., Hyattsville
Truitt, Dr. James H., Glenn Dale
Van Deventer, H. S., Leonardtown
Tyler, Russell, Cambridge
Veneman, Theodore W., Riverdale
Wagner, William E., Mt. Airy
Ward, Clement, Bel Air
Weller, W. C., Westminster
Wiederhold, J. J., Williamsport
Willett, J. H., Glenn Dale
Willis, J. William, Harrisonburg, Va.
Williams, Fred, Rock Hall
Willson, Thomas B., Rock Hall
Wilson, E. N., Cottage City
Wilson, John H., Berwyn
Wilson, Val C. Rockville
Wisemen, George C., Bladensburg
Woodell, N. J., Cottage City
Woods, Earle W., Glenn Dale
Young, K. A., Mt. Rainier

GRADUATE SCHOOL

Alexander, Lyle T., College Park
Alrich, George F., Washington, D. C.
Ambrose, Paul M., Ligonier, Pa.
Anders, Charles B., A. & M. College, Miss.
Anderson, David L., Baltimore
Anderson, William H., College Park
Anzulovic, James J., Omaha, Neb.
Arends, Katherine S., Washington, D. C.
Baker, William B., Baltimore
Bankert, John C., Union Mills
Bartram, M. Thomas, Paoli, Pa.
Basehore, Wilmer J., Mechanicsburg, Pa.
Basil, John L., Annapolis
Bauer, John C., Baltimore
Bean, Robert C., Washington, D. C.
Beavens, Elmer A., Washington, D. C.
Bellman, Earl S., Hyattsville
Bernard, Madeline M., Washington, D. C.
Berry, Myron H., West Chester, Pa.
Bewley, John P., Berwyn
Binkley, Charles H., Washington, D. C.
Blaisdell, Dorothy J., Washington, D. C.
Bond, Ridgely B., Jr., Baltimore
Boone, Paul D., Washington, D. C.
Bowers, Arthur D., Hagerstown
Boyer, Willard C., Ashland, Ohio
Brannon, David H., Hoquiam, Wash.
Bridgeforth, Roberta E., Hampton, Va.
Brown, Elizabeth B., Baltimore
Brown, Russell G., Morgantown, W. Va.
Brubaker, Robert, Baltimore
Brueckner, Arthur L., College Park
Bryan, Arthur H., Baltimore
Burger, John R. M., Jr., Hagerstown
Burton, John O., Washington, D. C.
Busbey, Ruth L., Mt. Rainier
Buzzard, Robert W., Washington, D. C.
Campbell, William P., Hagerstown
Carter, Roscoe H., Washington, D. C.
Casey, Lillian L., Takoma Park
Cecil, William K., Leonardtown
Chandler, Eunice C., New Gloucester, Maine
Chandler, Robert F., Jr., New Gloucester, Maine
Chideckel, Seymour M., Baltimore
Cochran, Doris M., Hyattsville
Coddington, James W., Friendsville
Coe, Johnnie B., Washington, D. C.
Cooley, Franklin D., Baltimore
Cordner, Howard B., College Park
Cornell, Nancy E., Landover
Coxen, Anne V., Silver Spring
Crosthwait, Samuel L., Hyattsville
Custis, William K., Riverdale
Cwalina, Gustav E., Baltimore
Daiger, W. Hammett, Linthicum
Dando, Llewellyn S., Baltimore
Day, Sister Theodora, Emmitsburg
Deal, Justin, Baltimore
DeDominicis, Amelia C., Baltimore
DeLand, Allan S., Washington, D. C.
Doyle, Aida M., Washington, D. C.
Dudley, Horace C., Washington, D. C.
Dunnigan, Arthur P., Pylesville
Eaton, Orson N., Hyattsville
Edmond, Joseph B., Saginaw, Mich.
Evans, William E., Jr., Washington, D. C.
Everson, Emma D., College Park
Faber, Jack, College Park
Fairbank, Thomas P., Baltimore
Figge, Frank H., Baltimore
Fisher, Paul L., Washington, D. C.
Fisher, Raymond A., Victorio, B. C.
Ford, Edwin L., Washington, D. C.
Foss, Noel E., Clear Lake, S. D.
Fox, Abraham L., Washington, D. C.
Frazier, William A., Carrizo Springs, Texas
Frazier, Willis T., Washington, D. C.
Fritz, James C., Berlin, Pa.
Gahan, James B., Berwyn
Garreth, Ralph, Philadelphia, Pa.
Gibson, Arthur M., Baltimore
Giffen, Robert C., Washington, D. C.
Gilbert, Howard W., Riverdale
Godfrey, Albert B., Branchville
Goldstein, Samuel W., Baltimore
Gould, Joseph G., Baltimore
Gow, Alexander, College Park
Graham, Castillo, College Park
Grasty, Lucy, Bladensburg
Grau, Fred V., Lincoln, Neb.
Greenberg, Harry L., Baltimore
Grove, Donald C., Baltimore
Gue, Edwin M., Germantown
Haines, Helena J., Hyattsville
Hall, Harlow H., Clarendon, Va.
Hall, Harvey B., Brandywine
Hamilton, Edgar H., Takoma Park
Hare, Mildred W., Washington, D. C.
Harley, Clayton P., Wenatchee, Wash.
Harris, Walter G., Washington, D. C.
Hartmann, Lucile C., Hutchinson, Kan.
Hartman, Paul A., Edgewood
Haskins, Willard T., Binghamton, N. Y.
Hatfield, Marcus R., Washington, D. C.
Haut, Irvin C., Spokane, Wash.
Henderson, Perlie D., Takoma Park
Hendricks, Robert W., College Park
Henry, Jack P., Takoma Park
Hetzel, Fred., Cumberland
Heuberger, John W., Warren, R. I.

Hiett, Herbert R., Aberdeen, S. D.
Hookom, Don W., Mt. Pleasant, Iowa
Hornibrook, Floyd B., Washington, D. C.
Hoshall, Edward M., Baltimore
Houser, Phyllis M., Brentwood
Howell, Van C., Sarepta, Miss.
Hull, J. Shelton, Jr., Halethorpe
Hunter, Herman A., College Park
Ichniowski, Casimer T., Baltimore
Jacobsen, Robert P., Crete, Neb.
Jarman, Gordon N., Baltimore
Jauregui, Jose, Buenos Aires, S. A.
Jenkins, Harold L., Chevy Chase
Jones, Minor C. K., Baltimore
Kaler, Frank H., Cuba, Ill.
Kalmbach, Virginia M., Washington, D. C.
Kanagy, Joseph R., Volant, Pa.
Kellogg, Claude R., New York City, N. Y.
Kennedy, George H., Hyattsville
King, John R., Bloomington, Ind.
Kirk, Jane, Colora
Kline, Gordon M., Washington, D. C.
Koons, Mary E., College Park
Koster, John, Hyattsville
Kruger, John H., Beltsville
Kurland, Louis J., Baltimore
Lagasse, Felix S., Newark, Del.
Leckie, Ethelyn M., Washington, D. C.
Leckie, James N., Washington, D. C.
Little, Glenn A., Edgewood
Lloyd, George W., University Park
Long, Henry F., Hagerstown
Long, Joseph C., Hyattsville
Lumsden, David V., Washington, D. C.
Lundquist, Harry B., Takoma Park
Mackert, Hazel T., College Park
Madigan, George F., Washington, D. C.
Manchey, L. Lavan, Glen Rock, Pa.
Marth, Paul C., Easton
Matthews, Earle D., Homestead, Fla.
Matthews, William A., Portsmouth, Va.
McClurg, Gregg, Washington, D. C.
McConnell, Harold S., College Park
McDonald, Emma J., Washington, D. C.
McNutt, Agnes E., Crawfordsville, Ind.
Meckling, Frank E., Takoma Park
Metcalfe, Howard E., Takoma Park
Meyers, Carl J., Baltimore
Miller, Dorothy J., Washington, D. C.
Miller, Ruth, Takoma Park
Mong, Lewis E., Washington, D. C.
Morrison, Albert, Baltimore
Murphy, Eleanor L., Washington, D. C.
Myers, Alfred T., Arlington, Va.
Nelson, Ole A., Clarendon, Va.
Nickels, Frank F., Casco, Va.
Oakley, A. Margarethe, Baltimore
Oberlin, Elisabeth S., Jessups
O'Brien, Edmund H., Washington, D. C.
Oglesby, Samuel C., Girdletree
Olsen, Marlow W., Beltsville
O'Neal, Hazel E., Baltimore
Ormond, John I., Baltimore
Painter, Elizabeth E., Baltimore
Parent, Joseph D., Washington, D. C.
Parker, Marion W., College Park
Parks, John J., Scottsboro, Ala.
Parlette, William A., Baltimore
Peach, Preston L., Mitchellville
Preinkert, Alma H., Washington, D. C.
Prince, Charles E., Jr., College Park
Pringle, Frances E., Punxsutawney, Pa.
Purdum, William A., Baltimore
Quigley, George D., College Park
Reed, Helen, College Park
Reedy, Robert J., Washington, D. C.
Riemenschneider, Roy W., Mt. Rainier
Roberts, B., Westernport
Rockwell, Paul O., Baltimore
Rose, William G., Salt Lake City, Utah
Rosen, Harry, Washington, D. C.
Ross, Richard C., Hyattsville
Rutledge, Alma W., Baltimore
Sager, Theron P., Washington, D. C.
Schweizer, Mark, Riverdale
Scruton, Herbert A., Baltimore
Seabold, Charles W., Glyndon
Sewell, Reese L., Hyattsville
Shank, Evelyn E., Washington, D. C.
Shrader, Sterl A., Huntersville, W. Va.
Shulman, Emanuel V., Baltimore
Siegler, Edouard H., Takoma Park
Siegler, Eugene A., Takoma Park
Simonds, Florence T., Riverdale
Slama, Frank J., Baltimore
Smith, Dorothy E., Washington, D. C.
Smith, Frank R., Church Creek
Smith, Paul W., Washington, D. C.
Smith, Thomas B., Bedford, Pa.
Smith, Virginia, Hyattsville
Smith, W. Harold, Washington, D. C.
Snyder, Dorothy L., Berwyn
Spadola, John M., Washington, D. C.
Spies, Joseph R., Wentworth, S. D.
Sproat, Ben B., Vincennes, Ind.
Spurr, Frank A., Creston, Iowa
Stoner, Kenneth G., Hagerstown
Straka, Robert P., Branchville
Strasburger, Lawrence W., Washington, D. C.
Stuart, Leander S., Bethesda
Stull, Louise J., Clarendon, Va.
Swenson, T. Lowell, Bethesda
Swingle, Millard C., Takoma Park
Temple, Martha R., Hyattsville
Thompson, John C., Takoma Park

Thompson, Ross C., Washington, D. C.
Tompkins, Mary E., Washington, D. C.
Underwood, Paul C., Washington, D. C.
Veitch, Fletcher P., Jr., College Park
Vincent, Lionel L., Westminster
Vreeland, Frederick F., Upper Darby, Pa.
Wagner, Richard D., Washington, D. C.
Walls, Edgar P., College Park
Weiland, Glenn S., College Park
Welsh, Claribel, College Park
Welsh, Mark, College Park
Westney, Mrs. Franc H., Washington, D. C.
White, Clark, Buckhannon, W. Va.
Whitney, Frank C., Edgewood
Williams, Loris E., Washington, D. C.
Wohlgemuth, George F., Washington, D. C.
Wondrack, Arthur J., Washington, D. C.
Woods, Mark W., Berwyn
Wright, T. Gorsuch, Baltimore
Yongue, Norman E., Pickens, S. C.
Zalesak, Emanuel F., College Park
Zervitz, Max M., Baltimore

COLLEGE OF HOME ECONOMICS

SENIOR CLASS

Essich, Mary A., Westminster
Huffington, Sara E., Eden
Kent, Elizabeth, Baltimore
King, Frances L., Frederick
Lamond, Ethel-Jean, Takoma Park, D. C.
McVey, Elizabeth J., Altoona, Pa.
Sargent, Eloyse, Washington, D. C.
Siehler, Kathryn E., Baltimore
Wells, Mary, Cottage City

JUNIOR CLASS

Bonthron, Mary E., Baltimore
Byrd, Vesta L., Crisfield
Claflin, Dorothy A., College Park
Coleman, Wilma, Hyattsville
Hughes, Esther F., Washington, D. C.
Hunt, Ruth A., Hyattsville
Lane, Dorothy T., Washington, D. C.
Lines, Helen W., Kensington
Matthews, Miriam B., Beltsville
Miller, Evelyn F., Westernport
Miller, Mary M., Grantsville
Nelson, Ruth D., Washington, D. C.
Oberlin, Phyllis A., Silver Spring
Reed, Rosa L., Washington, D. C.
Reynolds, R. Selena, North East
Shepherd, Claire, Berwyn
Smaltz, Ann E., Washington, D. C.
Smith, Lelia E., Hyattsville
Welsh, Sarah F., Baltimore
White, Margaret N., Princess Anne

SOPHOMORE CLASS

Arrow, Loretta C., Branchville
Brigham, Doris R., Landover
Cannon, Bertha E., Seaford, Del.
Farnham, Charlotte E., Washington, D. C.
Fritch, Esther M., Cumberland
Gilbertson, Gertrude E., Bladensburg
Gray, Melcina E., Brentwood
Hoage, Norma R., Chevy Chase
Jarboe, Elga G., Baltimore
Lanham, Clarice E., College Park
Lutes, Mildred E., Silver Spring
McFerran, Helen E., Cumberland
Mister, Amy, Baltimore
Moody, Elsie N., Washington, D. C.
Nutter, Mary M., Brunswick
Oberlin, Elise V., Silver Spring
Palmer, Eloise A., Chester
Pusey, Amando L., Princess Anne
Reinohl, E. Louise, Hyattsville
Roe, Catharine, Port Deposit
Solomon, Mary T., Silver Spring
Stanley, Alma E., Silver Spring
Storrs, Dorothy H., Linthicum Heights
Strasburger, Minna E., Baltimore
Van Slyke, Gretchen C., Washington, D. C.
Volkman, Hilda L., Washington, D. C.
Wood, Ethelyn S., Baltimore
Youngblood, Amber R., Washington, D. C.

FRESHMAN CLASS

Adams, Jean M. S., Clarksville
Adams, Mary E., Silver Spring
Berry, Mildred L., Landover
Binswanger, Elizabeth F., Baltimore
Boyd, Elinor M., East End, Pa.
Bristol, Barbara E., Washington, D. C.
Burslem, Ruth E., Hyattsville
Buschman, Anna B., Leonia, N. J.
Caruthers, Bertie L., Riverdale
Cook, Frances J., Catonsville
Dawkins, Jinnie H., College Park
Gurney, Ruth H., Washington, D. C.
Hester, Julia V., Washington, D. C.
Hill, Ruth L., Laurel
Jack, Sarah G., Rowlandville
Jacob, Felice E., Hamilton
LaMotte, Nova E., Woodlawn
Langrall, Margaret E., Baltimore

Loeffler, Ernestine M., Laurel
Martin, Janette W., Wilmington, Del.
McManus, Irma, Cockeysville
Moore, Catherine M., Bishop
Norman, Julia A., Stevensville
Owens, Ida J., Perryville
Pierce, Dorothy O., Baltimore
Riedel, Erna M., Gambrills
Salmon, Mary J., Washington, D. C.
Shriver, Charlotte M., Emmitsburg
Soper, Agnes P., Washington, D. C.
Trullinger, Virginia, Washington, D. C.
Voght, Carolyn L., Washington, D. C.
Wackerman, Maybelle I., Riverdale
Wassell, Eugenia C., Baltimore
White, Marian P., Washington, D. C.
Wolfe, Anne E., Hughesville
Wollman, Helen E., Baltimore

UNCLASSIFIED

Cotterman, Mae Y., College Park
Eaton, Effie M., Hyattsville
Harrigan, Selina R., Chevy Chase

SCHOOL OF LAW

FOURTH YEAR EVENING CLASS

Berry, George Mauduit, Lutherville
Black, H. Ross, Jr., Hanover, Pa.
Ferciot, Thomas Nathaniel, Jr., Baltimore
Gundersdorff, Charles Howard, Jr., Baltimore
Heck, Preston Patterson, Baltimore
Kahl, Arthur Gustavus, Baltimore
Lee, Agnes Lewis, Baltimore
McDorman, Francis Littleton, Baltimore
Meade, Hugh Allen, Baltimore
Melvin, Howard, Jr., Baltimore
Meyer, Paul Herbert, Baltimore
Ness, George Thomas, Jr., Baltimore
Parr, William Holton, Baltimore
Proctor, Kenneth Chauncey, Towson
Schap, Frank Joseph, Baltimore
Schmidt, Emil G., Baltimore
Small, Norman Jerome, Baltimore
Swain, Robert Lee, Baltimore
Turnbull, John Grason, Towson

THIRD YEAR DAY CLASS

Abell, Robert Louis, Baltimore
Ankeney, Isaac Donald, Clear Spring
Beachley, Frederick Edwin, Hagerstown
Chapman, S. Vannort, Baltimore
Doyle, Wm. Hazelwood, Baltimore
Driver, Wilmer Henry, Baltimore
Held, Charles William, Jr., Towson
Holter, Amos Albert, Jefferson
Holzapfel, Henry, III, Hagerstown
Klawans, Emanuel, Annapolis
Levering, Wilson Keyser, Jr., Ruxton
Lockwood, Bona Rosina, Catonsville
Martin, Walter Worth, Forest Hills, N. Y.
Matousek, James Frank, Baltimore
Mindel, Meyer, Baltimore
Nice, Deeley Krager, Baltimore
Rosenblatt, Leonard Harvey, Baltimore
Wagaman, Charles Francis, Hagerstown
Ziegler, Edward Seymour, Baltimore

THIRD YEAR EVENING CLASS

Brown, David Stanley, Baltimore
Clingan, Irvine Clayton, Boonsboro
Cohen, J. Samuel, Baltimore
Crane, Charles, Baltimore
Feldman, William Taft, Baltimore
Hughes, Thomas Alexander, Cardiff
Langdon, Paul Horace, Baltimore
Ludwig, Robert Eugene, Baltimore
Maggio, Rose Elizabeth, Baltimore
Mitchell, John Hanson, Baltimore
Monsma, Gerald, Baltimore
Neal, Sanford S., Jr., Annapolis
Peard, Frank Furnival, Baltimore
Prendergast, John Gilbert, Harrisburg, Pa.
Silverberg, Morris Morton, Baltimore
Spector, Samuel Alexander, Baltimore

SECOND YEAR DAY CLASS

Carrico, Rudolf Ambrose, Bryantown
Castleman, Ely Albert, Baltimore
Cohen, Bernard Solomon, Baltimore
Cooper, Franklin Kent, Salisbury
Crothers, Omar Derotheus, Jr., Elkton
Eagan, James Kay, Baltimore

Gomborov, A. David, Baltimore
Green, M. Clare Maccubbin, Annapolis
Gump, George, Baltimore
Haley, George Wentworth, Baltimore
Harris, Charles David, Baltimore
Kelly, John Francis, Baltimore
Klaff, Jerome Leonard, Baltimore
Loker, William Alexander, Leonardtown
Magruder, Lorraine Yvonne, Hagerstown
McIntosh, Joseph Rieman, Towson
Parkhurst, George Veasey, Baltimore
Scott, William Henry, Ocean City
Sebald, William Joseph, Baltimore
Shapiro, Herman, Baltimore
Sullivan, Vance Richmond, Baltimore
Truitt, May Hatton, Salisbury
VanSant, Warren Hyland, Greensboro
Warfel, Robert Warren, Havre de Grace
Williams, Estelle Porn, Baltimore

SECOND YEAR EVENING CLASS

Colvin, Joseph, Baltimore
Councill, Catherine Rowe, Halethorpe
Dorsey, Hammond Pendleton, Baltimore
Eskew, Don Carlos, Rochester, Minn.
Feeney, Aquin Paul, Granite
Goldstein, Albert, Baltimore
Hampton, John Henry, Baltimore
Janetzke, Nicholas August, Baltimore
Kerlin, Thomas Henry, Baltimore
Knadler, Robert Warren, Baltimore
Lankford, Harry Brewington, Baltimore
Mallonee, Lester Earl, Laurel
McCauley, James Lassell, Elkton
McKay, Douglass Alexander, Baltimore
Medwedeff, Jack Lloyd, Baltimore
Needle, Harry Kelso, Baltimore
Penn, Austin Emerson, Baltimore
Sahm, Louis A., Baltimore
Silverberg, Williard I., Baltimore
Simmonds, Carroll LeRoy, Baltimore
Skutch, Robert Frank, Jr., Baltimore
Stengel, Lewis Edward, Colgate
Watchorn, Carl William, Baltimore
Willis, Samuel Hood, Baltimore
Wise, James Alfred, Dover, Del.

FIRST YEAR DAY CLASS

Abbott, Charles F., Franklin, Mass.
Aidt, Norbert John, Anneslie
Brice, Richard Tilghman, III, Annapolis
Brower, Edmund David, Lutherville
Craig, William Pinkney, Jr., Baltimore
Crane, Francis Selden, Baltimore
Dryden, Joshua Lemuel, Salisbury
Epstein, Benjamin Francis, Centreville
Evans, Matthew Strohm, Sherwood Forest
Galvin, Joseph Mannion, Baltimore
Gordon, Alexander, III, Baltimore
Gott, Winson Gilbert, Jr., Annapolis
Harlan, Edwin, Baltimore
Harlan, Joseph, Baltimore
Harrington, Calvin, Jr., Cambridge
Harrison, Ernest Irvin, Laurel
Hoff, Stanford Ivan, Westminster
Jenifer, Walter Mitchell, Loch Raven
Knapp, Charles Henry, Jr., Baltimore
Mazzei, John Salvatore, Brooklyn, N. Y.
Patro, Joseph Stanislaus, Baltimore
Pennewell, Noah Ames, Snow Hill
Smith, Philip Boniface, Baltimore
Sodaro, Anselm, Baltimore
Williams, Charles Watkins, Glyndon
Wrightson, Samuel Hastings, Claiborne

FIRST YEAR EVENING CLASS

Ahroon, Lester Allen, Baltimore
Andrews, James Emanuel, Jr., Cambridge
Athey, Charles Edwards, Baltimore
Barker, Charles Bates, Baltimore
Carr, Eberle William, Baltimore
Chancellor, Arthur Bernard, Jr., Baltimore
Chertkof, George, Baltimore
Cockrell, Francis Irwin, Baltimore
Dean, Charles Thomas, Ridgely
Dowell, George Howard, Baltimore
Dulin, Wilbur Reginald, Annapolis
Finnerty, Joseph Gregory, Baltimore
Finney, George Junkin, Aberdeen
Freedman, Abraham, Baltimore
Gardiner, Norman Bentley, Jr., Riderwood
Getz, Louis, Baltimore
Griese, Arthur Adolph, Annapolis
Hanlon, Bernard Hilary, Jr., Baltimore
Kenney, Francis Louis, Jr., Pittsburgh, Pa.
Kirby, John Ignatius Carroll, Baltimore
Kowall, Joseph Michael, Baltimore
Kravetz, Louis Behr, Baltimore
Lawrence, John Heyer, Baltimore
Llewellyn, Martin Herbert, Baltimore
Lotz, John Bernard, Jr., Baltimore
Lowe, Edwin William, Baltimore
Mayfield, Thomas Hunt, Jr., Halethorpe
McCormick, Francis Xavier, Baltimore
McLaughlin, John Dennis, Baltimore
Mullikin, Kent Roberts, Laurel

Norris, Thomas Carroll, Baltimore
Oakley, Columbus Knight, Baltimore
Parks, Zadoc Townsend, Jr., Baltimore
Piel, Herman Davis, Baltimore
Schilpp, Ernest Allen, Baltimore
Schmidt, Florian, Baltimore
Smith, J. Lundie, Jr., Annapolis
Smith, Stewart Lee, Baltimore
Topper, Gerald Edward, Baltimore
Wellmann, William Ernest, Jr., Baltimore
White, Edgar A., Annapolis
Wolf, Irvin Otto, Baltimore
Zimmerman, Albert Joshua, Frederick

UNCLASSIFIED

Creed, Eugene, Jr., Frederick
Johnson, S. Lloyd, Catonsville
Pentz, John Angelo, Baltimore
Schad, Harry J., Baltimore

SCHOOL OF MEDICINE

GRADUATE STUDENTS

Bauer, John Conrad, Baltimore

SENIOR CLASS

Abrashkin, Mortimer Dick, New Haven, Conn.
Ahroon, Carl Richard, Jr., Baltimore
Ashman, Leon, Baltimore
Bell, Charles Ray, Jr., Lebanon, Pa.
Bell, James Russell, Canonsburg, Pa.
Bercovitz, Nathan, New York, N. Y.
Berger, Herbert, Brooklyn, N. Y.
Blum, Samuel Daniel, New York, N. Y.
Bogorad, Daniel Emil, Baltimore
Brown, William Edward, Los Angeles, Calif.
Byer, Jacob, New York, N. Y.
Cannon, Martin, Cleveland, Ohio
Chimacoff, Hyman, Newark, N. J.
Clayman, David Stanford, Baltimore
Crecca, Anthony Daniel, Newark, N. J.
Currie, Dwight McIver, Carthage, N. C.
Davis, Carroll Kalman, Brooklyn, N. Y.
Demarco, Salvatore Joseph, Baltimore
Diamond, Joseph George, Long Branch, N. J.
Dumler, John Charles, Baltimore
Eichert, Herbert, Woodlawn
Eisenbrandt, William Henry, Baltimore
Fein, Jack, Long Island, N. Y.
Fishbein, Elliot, Paterson, N. J.
Flom, Charles, Baltimore
France, Andrew Menaris, Hagerstown
Ganz, S. Evans, Brooklyn, N. Y.
Geller, Sam, Newark, N. J.
Gershenson, David Abraham, Baltimore
Gittleman, Sol Ellman, Brooklyn, N. Y.
Glass, Albert Julius, Baltimore
Gluckman, Albert Gerson, Wilmington, Del.
Gorenberg, Harold, Jersey City, N. J.
Grosh, Joseph Walter, Lititz, Pa.
Hall, Joseph Edwin, Newell, W. Va.
Halperin, David, Jersey City, N. J.
Hammell, Frank Mull, Trenton, N. J.
Hantman, Irvin, Baltimore
Harris, Jacob, Brooklyn, N. Y.
Hecht, Manes Scheuer, Baltimore
Hendler, Hyman Bernard, Baltimore
Hull, Harry Clay, Jr., Frederick
Jacobson, Meyer William, Baltimore
Kapian, Abraham Nathan, Brooklyn, N. Y.
Karfgin, Arthur, Baltimore
Katz, Abraham, New York, N. Y.
Katz, Leonard, Baltimore
Katzenstein, Laurence, Baltimore
Keiser, Sylvan, Brooklyn, N. Y.
Klimes, Louis Frank, Baltimore
Korostoff, Bernard, Brooklyn, N. Y.
Kress, Milton Bernard, Baltimore
Krieger, Alexander Allan, Pittsburgh, Pa.
Lechner, Sidney I., New York, N. Y.
Lefkowitz, Jacob, Brooklyn, N. Y.
Legum, Samuel, Baltimore
Lerner, George, Brooklyn, N. Y.
Lieberman, Samuel, New York, N. Y.
Louft, Reuben Richard, Hyattsville
Markman, Harry David, New York, N. Y.
MacMillan, William Owen, Charleston, W. Va.
McGovern, William Joseph, Carnegie, Pa.
Mebane, William Carter, Wilmington, N. C.
Mickley, John Hoke, Gettysburg, Pa.
Miller, Myron Joseph, New York, N. Y.
Moores, John Duer, Finksburg
Nachlas, Arthur, Baltimore
Newnam, Alpheus Carlton, Jr., Bellevue
Panebianco, Richard Robert, Long Island, N. Y.
Pear, Henry Robert, Washington, D. C.

Philip, Arthur Jay, Brooklyn, N. Y.
Pink, Solomon Harris, Passaic, N. J.
Prigal, Samuel Jeremiah, New York, N. Y.
Proctor, Samuel Edward, Cardiff
Reckson, Morris Murray, Brooklyn, N. Y.
Roberts, Marion Butler, Hillsboro, N. C.
Rohm, Jack Zeth, Carnegie, Pa.
Rosenthal, Henrietta, Washington, D. C.
Rosenthal, Stephen Isaiah, Scranton, Pa.
Rubenstein, Robert, Jersey City, N. J.
Sager, Harold, Bayonne, N. J.
Sanchez, Robert Luis, Mexico City, Mex.
Saunders, Thomas Sewell, Baltimore
Savage, John Edward, Washington, D. C.
Schwartz, David I., Baltimore
Shack, Max Herman, Springfield, N. J.
Shaw, John Jacob, Newark, N. J.
Siegel, Sidney Leon, Jersey City, N. J.
Silverstein, George, Derby, Conn.
Simmons, John Frederick, Cambridge
Snyder, Jerome, Baltimore
Sollod, Aaron Charles, Baltimore
Statman, Arthur James, Newark, N. J.
Stein, Charles, Baltimore
Stephenson, Frank Richard, Baltimore
Taylor, Francis Nicholson, Blacksburg, Va.
Thompson, Harry Goff, Mount Vernon, Ill.
Tomlinson, Thomas H., Thomasville, N. C.
Whicker, Max Evans, Winston-Salem, N. C.
Wilson, Frank, Jr., Greenville, N. C.
Wirts, Carl Alexander, Pittsburgh, Pa.
Zupnik, Howard Lester, New Freedom, Pa.
Zuravin, Meyer Harry, Keyport, N. J.

JUNIOR CLASS

Aaron, Harold Henry, New York, N. Y.
Baker, George Stansbury, Pikesville
Barnhardt, Albert Earl, Concord, N. C.
Beanstock, Sam, Brooklyn, N. Y.
Becker, Martin, East Orange, N. J.
Bellin, David Elias, East Elmhurst, Long Island, N. Y.
Bernstein, Joseph Cecil, Baltimore
Blitzman, Louis, New York, N. Y.
Bowman, Harry Daniel, Baltimore
Cohen, Marvin Meyer, Paterson, N. J.
Comegys, Richard Williamson, Millington
Diehl, Harold Clayton, Grantsville
DiStasio, Frank, New Haven, Conn.
Drucker, Victor, New York, N. Y.
Emanuel, Meyer, Brooklyn, N. Y.
Espinosa, Manuel, Rio Piedras, Porto Rico
Etkind, Meyer George, New Haven, Conn.
Fineman, Jerome, Baltimore
Fox, Haskell Wright, Troutman, N. C.
Franklin, Frank Anthony, Orange, N. J.
Garrison, Ralph Bernard, Glen Alpine, N. C.
Goldman, Abram, Baltimore
Goldman, Alexander Blodnick, Brooklyn, N. Y.
Goldman, Meyer Leo, Arverne, Long Island, N. Y.
Gorrell, James Stanley, Bel Air
Griggs, William Lemuel, Jr., Charlotte, N. C.
Harris, Earle Harold, New York, N. Y.
Hedgpeth, Louten Rhodes, Lumberton, N. C.
Hemminger, Earl Wentworth, Somerset, Pa.
Highstein, Gustav, Baltimore
Himelfarb, Albert Joseph, Baltimore
Hoover, William Alonzo, Crouse, N. C.
Hurwitz, George Hillel, Hartford, Conn.
Hyman, Joseph Jay, Brooklyn, N. Y.
Hyman, Morris, Stamford, Conn.
Kenler, Myron Lewis, Baltimore
Kent, Ann Patrick, Washington, D. C.
Keown, Lauriston Livingston, Baltimore
Kimmel, Charles, Newark, N. J.
Kline, Albert Adolph, Verona, Wis.
Kochman, Leon Arthur, Cumberland
Konigsberg, Wilfred Kane, Atlantic City, N. J.
Lentz, George Ellard, York, Pa.
Lifland, Bernard Daniel, Newark, N. J.
Lowman, Milton Edward, Baltimore
Malinoski, Wallace Henry, Baltimore
Matheke, George Adolph, Newark, N. J.
Miller, Benjamin, New York, N. Y.
Miller, Meyer George, Brooklyn, N. Y.
Moore, James Irving, Baltimore
Novenstein, Sidney, Milford, Conn.
Osserman, Kermit Edward, New York, N. Y.
Peer, George Foster, Grafton, W. Va.
Pico, Jose Teodoro, Coamo, Porto Rico
Racusin, Nathan, Baltimore
Ray, William Turner, Wake Forest, N. C.
Robinson, Daniel Robert, Brooklyn, N. Y.
Rosenberg, Arthur, Brooklyn, N. Y.
Rosenfeld, David Herman, Baltimore
Rubin, Samuel, Baltimore
Rutland, Hedley Ethelbert, York, Pa.
Sasscer, James Ghiselin, Upper Marlboro
Scarborough, Asa Mark, Greenville, S. C.
Schiff, Hyman, Annapolis
Schiff, Joseph, Annapolis
Schindler, Blane Markwood, Cumberland
Schlachman, Milton, Baltimore
Schneiman, Maurice Harris, Philadelphia
Schochet, George, Baltimore

Schwartz, Alex Robert, Pittsburgh, Pa.
Schwartz, Paul, Baltimore
Shea, Cornelius Joseph, Bridgeport, Conn.
Shinn, George Clyde, Concord, N. C.
Smith, Ashby Wade, Lynchburg, Va.
Soltis, Michael Joseph Wieciech, Baltimore
Stackhouse, Howard, Jr., Riverton, N. J.
Stern, Maurice Lee, Brooklyn, N. Y.
Szule, Stephen, New York, N. Y.
Taylor, Clifford Morrison, Westminster
Thumim, Mark, New York, N. Y.
Turano, Leonard Francis, Brooklyn, N. Y.
Van Metre, John Lee, Shepherdstown, W. Va.
Way, Samuel Eason, Beaufort, N. C.
Weisman, Samuel, Baltimore
Wolbert, Frank, Baltimore
Woodard, Barney Lelon, Kenly, N. C.
Woodford, Thomas Larry, Philippi, W. Va.
Zager, Saul, Newark, N. J.

SOPHOMORE CLASS

Abramovitz, Leonard Jerome, Baltimore
Adams, Thurston Ray, LaGrange, N. C.
Austraw, Henry Harrison, Dundalk
Bayer, Ica Eugene, Jr., Baltimore
Bayley, George Schwing, Yardley, Pa.
Berenstein, Stanley Harry, Baltimore
Blum, Louis Vardee, Wilmington, Del.
Brodey, David Franklin, Brooklyn, N. Y.
Burgtorf, George Edward, Baltimore
Campbell, Edgar Thrall, Hagerstown
Caples, Delmas, Reisterstown
Carliner, Paul Elliott, Baltimore
Cassidy, William Adrian, Bangor, Me.
Coates, Stephen Paul, Brooklyn, N. Y.
Cohen, Lawrence Jack, Baltimore
Cooper, Jules, Atlantic Ctiy, N. J.
Deitz, Joseph Robert, Trenton, N. J.
Diener, Samuel, Baltimore
Dorman, George Edward, Dormont, Pa.
Downey, Regis Fallon, Point Marion, Pa.
Dreher, Robert Hering, Kutztown, Pa.
Dunbar, John Charles, Pittsburgh, Pa.
Echols, John Edward, Richwood, W. Va.
Elterich, Charles Frederick, Pittsburgh, Pa.
Farr, Robert Wilbur, Millington
Fearing, William Lumsden, Elizabeth City, N. C.
Feldman, Leon Henry, Baltimore
Finegold, Joseph, Carnegie, Pa.
Gaskel, Jason Howard, Baltimore
Gelb, Jerome, Newark, N. J.
Gelman, Sidney, Paterson, N. J.
Goldstone, Herbert, Baltimore
Goodhand, Charles Luther, Stevensville
Goodman, Howard, Baltimore
Gordon, Joseph, Baltimore
Gutman, Isaac, Baltimore
Hanigsberg, Murray Joseph, Brooklyn, N. Y.
Healy, Robert Fairbank, Glyndon
Hoffman, Edward Sayer, Rochester, N. Y.
Horan, William Henry, Scranton, Pa.
Howard, William Lawrence, Federalsburg
Hummel, Leonard Malcolm, Baltimore
Hunt, Josiah Arnold, Berwyn
Hurwitz, Abraham, Baltimore
Insley, Philip Asbury, Cambridge
Janousky, Nathan, Baltimore
Jerardi, Joseph Victor, Baltimore
Johnson, Thorwald, San Francisco, Calif.
Kallins, Edward Selig, Baltimore
Katz, Simon, Brooklyn, N. Y.
Ketz, Wesley John, Glen Lyon, Pa.
Knoll, William, New York, N. Y.
Kurz, Theodore George, Meriden, Conn.
Lane, Edwin Charles, Hillside, N. J.
Lawler, Thomas Gorman, Burlingame, Calif.
Leass, Reuben, Brooklyn, N. Y.
Leavitt, Abraham Charles, Everett, Mass.
Levin, Manuel, Baltimore
Levin, Milton, Baltimore
Levine, Matthew, Brooklyn, N. Y.
Maginnis, Helen Irene, Baltimore
Mains, Marshall Paul, Rittman, Ohio
Mancuso, Joseph, Rayland, Ohio
Marlett, Neumann Clyde, Maplewood, N. J.
McNally, Hugh Bernard, Baltimore
Means, Milton Charles, Lemont Furnace, Pa.
Millett, Joseph, Pen-Mar, Pa.
Mirow, Richard Raymond, New York, N. Y.
Moore, Alfred Charles, Baltimore
Moulton, Olin Cates, Sebago Lake, Me.
Mund, Maxwell Herschel, Baltimore
Neal, Roland Abbott, Wilkinsburg, Pa.
Needleman, Max, Brooklyn, N. Y.
O'Connor, Raymond Francis, Punxsutawney, Pa.
Orans, Alfred Abraham, Brooklyn, N. Y.
Rabinowitz, Jacob Herbert, Harrison, N. J.
Reardon, William Thomas, Wilmington, Del.
Reier, Charles Henry, Glen Arm
Riehl, Louis Milton, Lansdowne
Roberson, Edward Leon, Tarboro, N. C.
Rosen, Morris, Philadelphia, Pa.

Rosenthal, Charles Morton, Brooklyn, N. Y.
Rudo, Nathan, Baltimore
Sacks, Milton Samuel, Baltimore
Satulsky, Emanuel Milton, Elizabeth, N. J.
Schwartz, Daniel James, Baltimore
Schwartz, Theodore Allison, Baltimore
Scoles, Peter Serafino, Long Branch, N. J.
Sedlacek, Joseph Arthur, Towson
Sekerak, Richard John, Bridgeport, Conn.
Siegel, Benjamin Israel, Baltimore
Siegel, Milton, New York, N. Y.
Sisserson, Barney, Brooklyn, N. Y.
Smith, William Benjamin, Salisbury
Snyder, John Newcomer, Uledi, Pa.
Sollod, Bernard Walter, Baltimore
Soltz, William Boyer, New York, N. Y.
Spitznagle, Vernon Edward, Fruitland
Sproul, Dorothy Gertrude, South Hamilton, Mass.
Stein, Milton R., Baltimore
Stephens, Wilson P., Stanardsville, Va.
Stutzman, Clyde Malverne, Jr., Williamsport, Pa.
Sugar, Samuel Jacob, North Beach
Sutton, Harold Lawrence, Newark, N. J.
Taylor, Andrew DuVal, Charlotte, N. C.
Teitelbaum, Harry Allen, Brooklyn, N. Y.
Terman, Irving, Brooklyn, N. Y.
Timberlake, Landon, University, Va.
Tuerk, Isadore, Baltimore
Udkow, Samuel, New York, N. Y.
Wagner, Richard, Elizabeth, N. J.
Warshawsky, Harry, Brooklyn, N. Y.
Wilder, Earle Maurice, Baltimore
Wolfe, William David, Baltimore
Zurawski, Charles, Providence, R. I.

FRESHMAN CLASS

Adelman, Milton Harris, Brooklyn, N. Y.
Albrittain, John Warren, LaPlata
Alessi, Edward James, Baltimore
Alonso, Miguel, Palmer, Porto Rico
Aungst, Melvin Rauch, Mechanicsburg, Pa.
Battaglia, Dominic Thomas, Baltimore
Bierer, Dan George, Delmont, Pa.
Bock, Charles Aloysius, Bellevue, Pa.
Booth, Harold Thomas, Westchester, N. Y.
Brouillet, George Hector, Holyoke, Mass.
Burns, Harold Hubert, Girardville, Pa.
Carney, William Howard, Sharon, Pa.
Cohen, Philip, Long Branch, N. J.
Connolly, John Calhoun, Taylorsville, N. C.
Cooney, Robert Francis, Scranton, Pa.
Coplin, George Joseph, Elizabeth, N. J.
Cornbrooks, Ernest Ivon, Jr., Collingswood, N. J.
Cotter, Edward Francis, Baltimore
Cranage, Bidwell Chapman, Bay City, Mich.
Davidson, Nachman, Baltimore
Dickey, Francis George, Baltimore
Diehl, Earl Henry, Baltimore
Dittmar, Stuart Watt, Ingram, Pa.
Dodge, Douglas Rude, Baltimore
Doerner, Alexander Andrew, New York, N. Y.
Drake, Francis James, Phillipsburg, N. J.
DuBois, Robert Lionel, New Haven, Conn.
Dunnigan, William Charles, Baltimore
Einhorn, Samuel Edward, Newark, N. J.
Ewald, August Ludwig, Jr., Baltimore
Fader, Ferdinand, East Orange, N. J.
Fichtner, Albon Russell, Johnstown, Pa.
Fox, Lester Mitchell, Baltimore
Freeman, Irving, Baltimore
Fruchtbaum, Robert Pearson, Newark, N. J.
Galitz, Philip Jacob, Brooklyn, N. Y.
Gerwig, Walter Henry, Jr., Parkersburg, W. Va.
Ginsberg, Benjamin, Baltimore
Glenn, Charles Arthur, Gastonia, N. C.
Godbey, John Randolph, McKendree, W. Va.
Grenzer, William Howard, Baltimore
Gross, Joseph Bernard, Baltimore
Hammill, Gerard Paul, Carnegie, Pa.
Harris, Aaron, Baltimore
Hartman, Ira Frank, Buckhannon, W. Va.
Heghinian, Jeannette Rosaline E., Baltimore
Helfrich, William Goldsborough, Catonsville
Herald, James Kennedy, Youngstown, Ohio
Herrold, Lewis Charles, Port Trevorton, Pa.
Hollander, Arthur, New York, N. Y.
Hugg, John Henry, Jeannette, Pa.
Kaminsky, Aaron Louis, Newark, N. J.
Kane, Harry Francis, Baltimore
Keller, Michael Lawrence, Paterson, N. J.
Klein, Harold Henry, Scranton, Pa.
Klompus, Irving, Bound Brook, N. J.
Knowles, Frederick Edwin, Jr., East Orange, N. J.
Laino, Frank Armento, Emmitsburg
Layton, Caleb Rodney, Canisteo, N. Y.
Levy, Abraham Maurice, Baltimore
Lewis, Archie Clifton, Kingston
Lichtenberg, Walter, New York, N. Y.
Lieb, Saul, Newark, N. J.
Llewelyn, Louis Grandin, Baltimore
MacLaughlin, Donald Clay, Hagerstown

Marek, Charles Bernard, Baltimore
Mays, Howard Brooks, Cockeysville
McDonough, Oscar Tracy, Jr., Washington, Pa.
McGregor, Alpine Watson, St. George, Utah
McGregor, Lorenzo Watson, St. George, Utah
McHenry, DeArmond John, Benton, Pa.
Mech, Karl Frederick, Baltimore
Milan, Joseph Simon, Baltimore
Montgomery, Bruce, Fairchance, Pa.
Noon, Milton A., Jr., Millersville
Park, Clermont Dixon, Parkersburg, W. Va.
Pepe, Anthony James, New Haven, Conn.
Pugatsky, David, Baltimore
Raffel, William, Baltimore
Reagle, Charles Donald, Baltimore
Robinson, Harry Maximilian, Jr., Baltimore
Robinson, Milton Irving, Brooklyn, N. Y.
Rodgers, Leo David, Baltimore
Rosen, Israel, Baltimore
Rosen, Sol Hyman, Bridgeton, N. J.
Rosenberg, Harold William, New York N. Y.
Russell, John Carroll, Maddox
Rutherford, Miriam Hook, Baltimore
Schmitt, George Frederick, Jr., Baltimore
Schmulovitz, Maurice Jacob, Baltimore
Schonfeld, Paul, Baltimore
Shapiro, Joseph, New York, N. Y.
Shapiro, Sydney Harold, Passaic, N. J.
Shaul, John Melvin, Richfield Springs, N. Y.
Shub, Morris, Baltimore
Siscovick, Milton, Baltimore
Stein, Benjamin Maxwell, Hempstead, N. Y.
Teitel, Louis, New York, N. Y.
Tetter, William Howard, Newark, N. J.
Tubowitz, Joseph, Brooklyn, N. Y.
Vozel, Luther F., Baltimore
Waghelstein, Julius Meyer, Baltimore
Warren, John McCullen, Laurel
Wehs, Edward Peter, Bellevue, Pa.
Williams, Jesse Frank, Jr., Clarksburg, W. Va.
Williams, Richard Jones, Cumberland
Williamson, Charles Vernon, Catonsville
Wilson, John Jacob, Baltimore
Wilson, Norman James, Sparrows Point
Wode, Alvin Eugene William, Baltimore
Wood, Everet Hardenbergh, Westfield, N. J.
Woodward, Lewis K., Jr., Westminster
Wright, Captain Short, Russell, Ky.
Zimmerman, Fred, New York, N. Y.

SCHOOL OF NURSING

GRADUATE STUDENTS

Bennett, Margaret Louise, North Tazewell, Va.
Bodmer, Doris Louise, Poolesville
Bolton, Dorothy Mae, Olney
Bond, Annie Irene, Hoyes
Click, Evelyn Ruth, Lonaconing
Conner, Evelyn Annette, Quitman, Ga.
Cox, Marie Olga, Waverly, Va.
Ervin, Erma Irene, Keyser, W. Va.
Hall, Marion Claudia, Red Lion, Pa.
Helsby, Helen Roselyn, East New Market
Horsman, Florence Rowe, Bivalve
Langford, Elton Louise, Frostburg
Roach, Rowena Georgia, Hagerstown.
Toms, Josephine Annabelle, Myersville.

SENIOR CLASS

Butler, Nellie Virginia, Great Cacapon, W. Va.
Cameron, Blanche Virginia, Millville, W. Va.
Compton, Ruth Jane, Sinks Grove, W. Va.
Durst, Gladys Leona, Grantsville
Emery, Mary Elizabeth, Neffs, Ohio
Gladden, Irene Douglas-Travers, Princess Anne
Hardin, Maurice, Chester, S. C.
Holloway, Eva Opal, Baltimore
Huddleston, Margaret Louise, Raleigh, N. C.
Lee, Virginia, Quincy, Fla.
McFadden, Ella Virginia, Port Deposit
Michael, Mildred Elizabeth, Frostburg
Miller, Carrie Estelle, Red Lion, Pa.
Miller, Ella Irene, Red Lion, Pa.
Morris, Ruby Harrold, Stuarts Draft, Va.
Murdoch, Virginia Louise, Mount Airy
Reifsnider, Janet Beryl, Keymar
Richards, Margaret, Baltimore
Rodes, Louella Mildred, Baltimore
Rudisill, Gladys Louise, Iron Station, N. C.
Schaffer, Ruth Madeline, Hagerstown
Schuh, Josephine Alice, Keyser, W. Va.
Taylor, Arminta Eveline, Red Lion, Pa.

Thompson, Julia Weddington, Davidson, N. C.
Wilburn, Clara Evelyn, Grantsville
Worthy, Mary Elizabeth, Chester, S. C.

INTERMEDIATE CLASS

Barclift, Daphne Garnette, Durants Neck, N. C.
Blum, Dorothy Emily, Finksburg
Bowman, Dorothy Mae, Tarrytown, N. Y.
Britt, Bernice Mabel, Seaboard, N. C.
Burnette, Arra Marie, Kearneysville, W. Va.
Caldwell, Thelma Jacqueline, Parkersburg, W. Va.
Christopher, Dorothy, Hurlock
Clark, Marie Helen, Havre de Grace
Conner, Bessie Ellen, Liberty Grove
Dahlmer, Ruth Emma, Linthicum Heights
Davis, Thelma Elizabeth, Elizabeth City, N. C.
Hinchman, Lila Margaret, Logan, W. Va.
Hix, Gladys Gertrude, Seneca, S. C.
Jones, Doris Christina, Church Creek
Knowles, Hilda Maie, Hertford, N. C.
Mattingly, Kathryn Parr, McHenry
McCune, Mary Virginia, Williamstown, W. Va.
McKeel, Allie Sue, Ahoskie, N. C.
Melson, Edna Estelle Martin, Aecomac, Va.
Melson, Sallie Maria, Accomac, Va.
Reese, Mildred Evelyn, Venton
Royer, Leah May, Sabillasville
Scarborough, Bertha Elizabeth, Whiteford
Sherman, Margaret Claive, Williamsport, Pa.
Skinner, Martha Willanna, Baltimore
Stack, Virginia Winifred, Hurlock
Stein, Anna Elizabeth, Meyersdale, Pa.
Wengerd, Marguerite Marie, Meyersdale, Pa.
Wright, Dorothy Carolyn, Williamsport, Pa.
Wynne, Vivian Walker, Columbia, N. C.

JUNIOR CLASS

Cross, Sally Norfleet, Gatesville, N. C.
Deans, Pauline Jackson, Elizabeth City, N. C.
Gosnell, Margaret Anne, Martinsburg, W. Va.
Gustafson, Louise Amalie, Fort Pierce, Fla.
Haynie, Elizabeth Ruth, Edwardsville, Va.
Hoffmaster, Marguerite Moler, Millville, W. Va.
O'Neil, Catherine Augusta, Monongahela, Pa.
Paul, Louise Martin, Washington, N. C.
Rice, Mildred Elizabeth, Gapland
Rohde, Elizabeth Laura, Pikesville
Uber, Esther Eleanor, Ellicott City
Warner, Willie Hollace, Keymar
Wright, Hazel Martha, Williamsport, Pa.

PROBATIONERS

Anderson, Attie Mae, Webster Springs, W. Va.
Barnes, Helena Virginia, Salisbury
Bennett, Mary Elizabeth, Mardela Springs
Bladen, Jewell Ardella, College Park
Carroll, Alma Mae, Garner, N. C.
Cartwright, Lenora, Elizabeth City, N. C.
Conklin, Ada Lythe, Hyattsville
Conley, Betty Ann, Logan, W. Va.
Davis, Clarissa Regina, Baltimore
Dobbins, Delia Elfred, Diana, W. Va.
Dobbins, Vera Pearl, Diana, W. Va.
Doll, Elizabeth Ann, Holden, W. Va.
Dutterer, Bernice May, Westminster
Everette, Irene Estelle, Bath, N. C.
Gregorius, Gertrude Xenia, Baltimore
Grossnickel, Evelyn Viola, Hagerstown
Harris, Ruth Maxine, Elizabeth City, N. C.
Held, Margaret Fredericka, Towson
Howes, Barbara Irene, Sykesville
Koontz, Elizabeth Hettie, Westminster
Lewis, Myra Elizabeth, Takoma Park, D. C.
Lilly, Catherine Nancy, Glen Morgan, W. Va.
Mander, Helen Louise, Alexandria, Va.
Matzen, Kathryn Margaret, Berwyn
Mitchell, Margaret Naomi, East New Market
Nixon, Elizabeth Maie, Winfall, N. C.
Parvin, Sara Margaret, Hurlock
Roth, June Keen, Baltimore
Rowles, Margaret Gertrude, Jessup
Seipt, Isabelle, Sparrows Point
Snyder, Wilda Louise, Somerset, Pa.

Steinwedel, Lois Marguerite, Baltimore
Tanttari, Gertrude Viola, Dundalk
Taylor, Elizabeth Deen, Preston
Thompson, Emma Virginia, Hurlock
Walker, Dorothy Ethel, Senora, Va.
Weller, Ethel Elizabeth, Baltimore
Wheeland, Dea Winafred, Dundalk

SCHOOL OF PHARMACY

GRADUATE STUDENTS

Bauer, John Conrad, Baltimore
Cwalina, Gustav Edward, Baltimore
DeDominicis, Amelia Carmel, Baltimore
Foss, Noel E., Clear Lake, South Dakota
Giffen, Robert Clark, Washington, D. C.
Goldstein, Samuel William, Baltimore
Greenberg, Harry Lee, Baltimore
Grove, Donald Cooper, Baltimore
Hoshall, Edward Melchoir, Baltimore
Ichniowski, Casimer Thaddeus, Baltimore
Manchey, L. Lavan, Glen Rock, Pa.
Meyers, Carl Jording, Baltimore
Roberts, Bertram, Westernport
Rosen, Harry, Washington, D. C.
Shulman, Emanuel Veritus, Baltimore
Slama, Frank James, Baltimore
Wright, Thomas Gorsuch, Baltimore
Zervitz, Max Morton, Baltimore

FOURTH YEAR CLASS

Baker, William B., Baltimore
Batalion, Abraham Louis, Baltimore
Downs, Grant, Jr., Baltimore
Dyott, William Heller, Baltimore
Ginsberg, Benjamin Herman, Baltimore
Holtgreve, Karl Harry, Baltimore
Hunt, William Howard, Baltimore
Jaeggin, Richard Ben, Baltimore
Katz, Joseph, Baltimore
Millett, Sylvia, Pen-Mar
Morstein, Raymond Milton, Baltimore
Oken, Louis Edward, Baltimore
Petts, George Edward, Jr.
Purdum, William Arthur, Baltimore
Rostov, Samuel Joseph, Baltimore
Rubin, Sylvan Isadore, Baltimore
Schmalzer, Dorothy Elizabeth, Baltimore
Sherman, Louis Lazar, Baltimore
Svarovsky, John William, Baltimore
Weinstein, Jack Joseph, Baltimore
Weiner, Martin, Baltimore
Wolf, Nathan, Baltimore
Wollman, Joseph I., Baltimore

THIRD YEAR CLASS

Abramson, Daniel Jerome, Baltimore
Askey, Wilbur Gibson, Baltimore
Austraw, Richard Freeman, Dundalk
Baier, John Cletus, Baltimore
Beck, Samuel David, Baltimore
Berman, Frederic Theodore, Baltimore
Carr, Charles Jelleff, Baltimore
Czekaj, Leo Michael, Baltimore
Davis, Louis Detrick, Baltimore
Drozd, Joseph, Baltimore
Dvorak, George J., Baltimore
Eisen, Martin David, Baltimore
Elsberg, Milton Leonard, Baltimore
Falagan, Luis, Mayaguez, Porto Rico
Feldman, Charles William, Baltimore
Feldman, Morris, Baltimore
Fleagle, Mildred Carol, Baltimore
Frohman, Isaac, Baltimore
Galperin, Irving Oscar, Baltimore
Goldberg, Harry Joel, Baltimore
Gordon, Charles, Baltimore
Gordon, Samuel, Baltimore
Gorfine, Bernard Maurice, Baltimore
Heck, John Conrad, Baltimore
Heneson, Henry, Baltimore
Hens, Leonard Louis, Baltimore
Hulla, Joseph James, Baltimore
Jacobs, Louis Oscar, Baltimore
Jules, Bernard C., Baltimore
Kaminski, Felix H., Baltimore
Karwacki, Wm. Stanley, Jr., Baltimore
Kesmodel, Chas. Raymond, Baltimore
Kirson, Walter, Baltimore
Kramer, Leonard Howard, Baltimore
Libowitz, Aaron M., Baltimore
Love, Edward Bennett, Atlantic City, N. J.
Mackowiak, Stephen Casimir, Colgate
Mendelson, Herman, Baltimore
Messina, Julius, Baltimore
Miller, Reuben, Baltimore
Moscati, Marius Anthony, Baltimore
Myerovitz, Joseph Robert, Baltimore
Myers, Lyndon Beaver, Glen Rock, Pa.
Naiditch, Morton Elliott, Baltimore
Ordecki, Anthony Victor, Elizabeth, N. J.
Parr, William Andrew, Baltimore

Pfeifer, Charles Michael, Baltimore
Richmond, Jerome, Baltimore
Rodriguez, Demetrio Antonio, Mayaguez, Porto Rico
Sacks, Morris, Baltimore
Sandals, George Eugene, New Britain, Conn.
Schmidt, Jacob, Baltimore
Segall, Jack, Baltimore
Sellers, Harry High, Cumberland
Shimanek, Lawrence Joseph, Baltimore
Shipley, Albert Robosson, Baltimore
Silberman, Irving, Baltimore
Silberman, Joseph, Baltimore
Sisco, Samuel, Baltimore
Snyder, Sidney, Baltimore
Stecher, Joseph Louis, Baltimore
Steiner, Albert, Baltimore
Vojik, Edward Charles, Baltimore
Wehner, Daniel George, Baltimore
Wolf, Ida Noveck, Baltimore
Young, James John, Baltimore
Zerwitz, Sidney, Baltimore

SECOND YEAR CLASS

Abramowitz, Manuel, Baltimore
Abrams, Jesse, Baltimore
Anderson, Truman Lee, Baltimore
Ashman, Martin, Baltimore
August, Henry John, Baltimore
Balotin, Louis Leon, Baltimore
Barranco, Charles Frank, Baltimore
Barshack, Jack, Baltimore
Beitler, Leonard, Baltimore
Bennett, Lester Leroy, Baltimore
Blum, Abraham, Baltimore
Blumberg, Stanley Alexander, Baltimore
Brady, Robert Wilson, Baltimore
Brill, Leonard, Baltimore
Browdy, Emanuel,. Baltimore
Bomstein, Sol, Baltimore
Burtnick, Lester Leon, Baltimore
Coakley, Andrew Joseph, Baltimore
Daily, Louis Eugene, Baltimore
Dausch, Michael Joseph, Baltimore
Dittrich, Theodore Thomas, Baltimore
Dolgin, Daniel, Baltimore
Dunker, Melvin Frederick William, Baltimore
Farber, Charles Israel, Baltimore
Feldman, Milton Herbert, Baltimore
Finkelstein, Karl Henry, Baltimore
Foxman, Marvin Jay, Baltimore
Fribush, Robert, Baltimore
Friedman, Albert, Baltimore
Friedman, Gilbert I., Baltimore
Gareis, Calvin Louis, Baltimore
Gitomer, Betty, Baltimore
Gleiman, Theodore, Baltimore
Goldberg, Sigmund, Baltimore
Goldsmith, Fred Emanuel, Baltimore
Grau, Frank James, Baltimore
Greenberg, Alvin A., Baltimore
Greenfield, Charles. Baltimore
Hackett, Bernard Edward, Baltimore
Haransky, David Jacob, Baltimore
Henderson, Nathaniel Potter, Baltimore
Hewitt, Cecil Bowen, Baltimore
Hillman, Gilbert, Baltimore
Kaplan, Isadore, Baltimore
Kelman, Nathan Allen, Wallingford, Conn.
Kemick, Irvin Bernard, Baltimore
King, Alfred Michael, Baltimore
Kirson, Jerome, Baltimore
Klotzman, Robert Harold, Baltimore
Kolman, Lester Norman, Baltimore
Lapin, Bernard Jacob, Baltimore
Levin, Bernard, Baltimore
Levin, Philip, Accomac, Va.
Leyko, Gregory William August, Baltimore
Littman, Samuel Stanley, Baltimore
Lusco, Santi Vincent, Baltimore
Macks, Ben Harold, Baltimore
Maggio, Anthony Joseph, Annapolis
Markin, Samuel, Baltimore
Michael, Lucas Alphonse, Baltimore
Miller, Abe, Baltimore
Moshenberg, William, Baltimore
Myers, Charles, Baltimore
Newman, David, Baltimore
Novey, Sam, Baltimore
Nusinow, Samuel, Baltimore
Pass, Isidore, Baltimore
Paul, Howard, Baltimore
Pinerman, Jerome, Baltimore
Pollekoff, Morris, Baltimore
Potash, Oscar, Baltimore
Pressman, Harry, Baltimore
Preston, Bernard John Jr., Baltimore
Resnick, Elton, Baltimore
Rosenstein, Harry Bernard, Baltimore
Rotkovitz, William, Baltimore
Rudman, Melvin Harry, Baltimore
Rudy, Harry Robert, Hagerstown
Safran, Sidney, Baltimore
Santoni, David Adam, Baltimore
Sapperstein, William, Baltimore
Schammel, Adam John, Baltimore
Schmalzer, William Joseph, Baltimore

Schnaper, Morton Joseph, Baltimore
Serra, Catherine Margaret, Baltimore
Shear, Meyer Robert, Baltimore
Shuster, Leon Paul, Baltimore
Smith, Maurice R., Baltimore
Sperandeo, Frank J., Baltimore
Sudler, Olive Wright, Baltimore
Taich, Louis, Baltimore
Tattar, Leon Lee, Baltimore
Thayer, Franklin Edmondson, Baltimore
Troja, Louis Francis, Baltimore
Velinsky, Sylvia Lois, Baltimore
Vogel, Louis, Jr., Baltimore
Ward, Michael James, Westernport
Weisman, Harry Lee, Jr., Baltimore
Wilderson, Reginald S., Baltimore
Witzke, Louis Henry, Baltimore
Yevzeroff, Jeannette Estelle, Baltimore

FIRST YEAR CLASS

Anderson, Solon Lee, Baltimore
Balcerzewski, Bernard Wallace, Baltimore
Barletta, Jose Rafael, Mayaguez, Porto Rico
Batt, Merlin Theodore, Baltimore
Bercovitz, Leon Judah, Baltimore
Berman, Abraham Samuel, Baltimore
Blank, Nathan, Baltimore
Blitz, Louis, Baltimore
Blivess, Manuel, Baltimore
Borcherding, William Henry, Baltimore
Brownstein, Milton J., Baltimore
Chenowith, Ralph Stallings, Baltimore
Chin, Lillian, Baltimore
Ciurca, Joseph Charles, Baltimore
Coburn, William Louis, Dundalk
Cohen, Barnard Charlton, Baltimore
Cohen, Martin Smith, Baltimore
Cohen, Morris, Baltimore
Cohen, Samuel, Baltimore
Conner, Elmer Smith, Baltimore
Cummins, Calvert, Baltimore
Damico, Samuel, Baltimore
Danoff, Abe, Baltimore
Dickman, Arnold Louis, Baltimore
Dodd, William Anthony, Baltimore
Drager, Albert, Baltimore
Drennen, James Holly, Havre de Grace
Dubin, Max, Baltimore
Eichert, Arbold Herman, Baltimore
Eisenberg, Louis, Baltimore
Euzent, Hannah, Mount Airy
Federico, Philip Joseph, Baltimore
Feinstein, Isadore, Baltimore
Feldman, Stanley B., Baltimore
Feldstein, Theodore, Baltimore
Feret, Julius Walter, Baltimore
Fink, Francis Thomas, Baltimore
Finkelstein, Ellwood, Baltimore
Foster, Richard Ivanhoe, Baltimore
Fox, Samuel Louis, Baltimore
Fribush, Sidney, Baltimore
Friedman, Milton, Baltimore
Gabler, William Henry, Baltimore
Geiger, Edward Burns, Hagerstown
Gettier, Henry Clarke, Baltimore
Glass, Abraham Leonard, Baltimore
Golden, Eli, Baltimore
Goldman, Harold Kaufman, Baltimore
Goodman, Sylvan, Baltimore
Goteiner, Hyman, Paterson, N. J.
Gounaris, Themistocles Nicholas, Baltimore
Grossman, Bernard, Baltimore
Grzeczka, Michael Francis, Baltimore
Gurbelski, Alfred Michael, Baltimore
Guyton, William Lehman, Baltimore
Haase, John Henry, Baltimore
Hare, Clifford Allen, Jr., Baltimore
Harmatz, Irving Joseph, Baltimore
Healey, William G., Jr., Baltimore
Honkofsky, Jerome, Baltimore
Hoopes, David Thomas, Bel Air
Horwitz, Isadore, Baltimore
Januszeski, Francis Joseph, Baltimore
Jeppi, Elizabeth Veronica, Baltimore
Katz, E. Sydney, Baltimore
Katz, Gabriel Elliott, Baltimore
Katzoff, Isaac, Baltimore
Kirk, Catherine Evans, Rising Sun
Kolker, Frank Milton, Baltimore
Komenda, Raymond Joseph, Baltimore
Lambden, Harry Paul, Baltimore
Lang, Louis William, Baltimore
Lasowsky, Frederick William, Hartford, Conn.
Lehtinen, Helen Maria, Baltimore
Leibowitz, Benjamin, Baltimore
Leites, Blanche, Baltimore
Levenson, Julius Victor, Baltimore
Levin, Israel, Baltimore
Libauer, Meyer, Baltimore
Liberto, John, Baltimore
Lindenbaum, Morris, Baltimore
Liss, Nathan Isaic, Baltimore
Loftus, John, Baltimore
Lutzky, Joseph, Baltimore
Mack, George Henry, Baltimore
Maggio, Peter Joseph, Baltimore
Mailman, Norton William, Baltimore
Mandraw, Mary A., Baltimore
Marcus, Max, Baltimore
Markin, Edward Abraham, Baltimore

Mentis, Anthony Peter, Baltimore
Mermelstein, David Harry, Baltimore
Michelson, Donald, Baltimore
Mikolayunas, John Peter, Baltimore
Millman, Harry Charles, Baltimore
Mindel, Alvin, Baltimore
Molinari, Salvatore, Baltimore
Molofsky, Leonard Carl, Baltimore
Morris, Samuel, Baltimore
Muller, Stephen Edwin, Baltimore
Musher, Arthur Albert, Baltimore
Muth, William Joseph, Baltimore
Noel, Harriett Ruth, Hagerstown
Ogrinz, Alexander John, Baltimore
Pappas, Michael William, Baltimore
Pariser, Albert, Baltimore
Patterson, Norman Clifton. Butler, Pa.
Patti, William Anthony, Baltimore
Pelz, Frank John, Jr., Baltimore
Plovsky, Nathan, Baltimore
Pollack, Louis Joel, Baltimore
Portney, Samuel, Baltimore
Prostic, Harry, Baltimore
Rawe, Howard Augustus, New Martinsville, W. Va.
Renner, Wallace Walter, Baltimore
Richmond, Sewell Edward, Baltimore
Rohr, Donald Leo, Baltimore
Rose, Louis, Baltimore
Rosenberg, Leon, Baltimore
Schaefer, John Ferdinand, Baltimore
Scheinker, William Hillel, Canton, Ohio
Schulte, William Albert, Baltimore
Schuman, Harry William, Baltimore
Schwartz, Alvin, Baltimore
Schwartz, Edward, Baltimore
Schwatka, William Herdman, Jr., Baltimore
Sevcik, Charles Vincent, Baltimore
Shapiro, Harry, Baltimore
Shapiro, Milton Herman, Baltimore
Sharp, Nathaniel, Randallstown
Sheppard, Robert Clay, Baltimore
Shure, Irvin, Baltimore
Siegrist, John Clifford, Raspeburg
Skruch, Walter John, Baltimore
Sollod, Sylvan Jacob, Baltimore
Solomon, Jesse, Baltimore
Stain, Dorothy Mae, Baltimore
Steel, Harold, Baltimore
Steinberg, Morris William, Baltimore
Stiffman, Jerome Abraham, Baltimore
Stradley, Thomas Allan, Chestertown
Swiss, Adam George, Baltimore
Taylor, Leon Joseph, Baltimore
Taylor, Louis, Baltimore
Tillery, John William, Baltimore
Tracey, Grace Louise, Hampstead
Tucker, Alexander, Baltimore
Udoff, Benjamin, Baltimore
Urlock, John Peter, Jr., Baltimore
Valle, Philip Joseph, Baltimore
Walman, Morris, Baltimore
Warshaw, Samuel, Baltimore
Yakel, John Stanley, Jr., Baltimore

SPECIAL STUDENTS

Battaglia, Joseph John, Baltimore
Eagle, Philip Tober, Baltimore
Ensor, Bennett Scott, Baltimore
Maser, Louis R., Baltimore
Miller, Philip, Paterson, N. J.

THE SUMMER SCHOOL—1931

Aaronson, Martha, Aberdeen
Abadie, Berthe F., Washington, D. C.
Abbott, Lilias C., Lonaconing
Adams, Jean M. S., Clarksville
*Adkins, James S., Newark
Aist, Dudley C., Cheltenham
Alband, Jo Della, Silver Spring
Albin, William D., Rohrersville
Albright, M. Louis, Washington, D. C.
*Aldridge, William D. K., Centreville
Allen, John P., Baltimore
Anderegg, Eunice B., Washington, D. C.
*Anders, Charles B., A. & M. College, Miss.
Andre, Winnie, Washington, D. C.
Apple, Mary R., Cumberland
Appler, Helen I., Washington, D. C.
*Archer, Cornelia L., Bel Air
*Armstrong, Herbert E., McDonogh
Arnold, Julia C., Brentwood
Atkinson, Ardis I., Washington, D. C.
Aud, Trujean H., Rockville
Austin, Grace, Washington, D. C.
Averyt, Clarence (Mrs.), Palestine, Texas
Baden, Clara G., Brandywine
Baker, Thelma L., Williamsport
Baker, Urla G., Williamsport
Baker, William A., Mt. Airy
Ball, Marjorie D., Takoma Park
*Balog, George J., North East
Barnard, Mary H., Cumberland
Barner, Lucille, Hagerstown

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* Graduate Students.

Barnhart, C. Paul, Hagerstown
Barnhill, Theresa, Cumberland
Barnsley, Lucy H., Rockville
Bartoo, Donald G., Hyattsville
*Basehore, Wilmer J., Mechanicsburg, Pa.
Bates, Marian M., Chevy Chase, D. C.
*Bauer, John C., Baltimore
Beale, William L., Washington, D. C.
Beall, George H., Derwood
*Bean, Robert C., Washington, D. C.
Beauchamp, Franklin, Snow Hill
Beauchamp, Mildred, Westover
*Beaven, George F., Hillsboro
Beard, Haidee V., Thurmont
Beard, Margaret B., Thurmont
*Beatty, William P., College Park
Beck, Alma K., Davidsonville
Beer, Louis A., Washington, D. C.
Bell, Mary V., Tuscarora
*Bellman, Earl S., Hyattsville
*Belote, Francis A., Pocomoke City
Belt, Norman B., Hyattsville
Bender, Lillian H., Hyattsville
Bennett, Mary A., Upper Marlboro
Bennett, Ruth, Flintstone
Berger, Lola W., Mechanicsville
*Berry, Myron H., West Chester, Pa.
Bicky, Lula R., Baltimore
Biddle, Miriam D., Chesapeake City
Biddle, Ruth C., Charlestown
Biggs, Gerald A., Mt. Lake Park
Birch, Marian, Hyattsville
*Bishoff, Roselle, Oakland
Bishop, Hulda, Kitzmiller
*Black, Agatha, Friendsville
*Blaisdell, Dorothy J., Washington, D. C.
*Blandford, Josephine, College Park
Blenthinger, Charles L., Frederick
Blickenstaff, Goldie M., Hagerstown
Blount, Lenore, College Park
Bond, J. May, Union Bridge
Boswell, Aileen, Washington, D. C.
Boward, Mildred A., Clear Spring
Bowen, Laura, Parran
Bowers, Helen M., Thurmont
Bowie, John H., Washington, D. C.
*Bowman, Earl E., Meyersdale, Pa.
Bowman, Emma M., Mount Airy
Bowman, Louise F., Bladensburg
Boylan, Mary N., Washington, D. C.
Bradburn, Jeannett M., Lonaconing
Bradford, Laura M., Darlington
Bradford, Ruth V., Bennings, D. C.
Brain, Earl F., Frostburg
Brauer, Alfred H., College Park
Breakall, Mary E., Hancock
Brennan, Alice M., Washington, D. C.
Brewer, Charles A., Rockville
Brewer, Virginia F., Rockville
Bricker, Kathryne M., Washington, D. C.
Bristol, Barbara E., Washington, D. C.
*Bromley, Luther F., Stockton
Bromwell, Susan E., Madison
Brooke, Dorothy A., Washington, D. C.
Brooks, James T., Washington, D. C.
Brown, Kathryn G., Hagerstown
Brown, Marshall G., Mt. Lake Park
*Brown, Paule, Severna Park
Brown, Ronald F., Washington, D. C.
*Brown, Russell G., Morgantown, W. Va.
Bruehl, John T., Jr., Centreville
Bruehl, John T., Centreville
Bryan, Helen R., Washington, D. C.
*Buckler, Milburn A., Huntingtown
Burbage, Carolyn M., Berlin
Burdette, Ola L., Washington, D. C.
*Burgee, Meil D., Monrovia
Burger, Mary H., Frederick
Burrier, Serena E., Bel Air
Burroughs, Jeannette, Aquasco
*Burrows, Nellie T., Cumberland
Burtner, Emma B., Keedysville
Burton, E. Helen, Tyaskin
Burton, Julia, Washington, D. C.
Butz, Harry P., Washington, D. C.
*Byler, Emma S., Washington, D. C.
Cade, Hilda R., Denton
Callahan, Mary N., Easton
Callis, Mason W., Accident
*Caltrider, S. P., Mt. Rainier
Campbell, Marjorie H., Washington, D. C.
Canty, Elizabeth, Midland
Carlson, C. Allen, Crisfield
*Carmichael, Berton E., Riverdale
Carpenter, Zelda N., Washington, D. C.
Carrico, Rudolf A., Bryantown
*Carscaden, Mary E., Cumberland
Caruthers, Mary I., Salisbury
Caulfield, Mary S., Frederick Junction
*Chandlee, Elmer K., Libertytown
*Chandler, Robert F., Augusta, Maine
Chaney, Ruth, Hyattsville
Charles, Rebecca, Federalsburg
Chesser, Violet, Pocomoke City
Chiswell, Marjorie, Dickerson
Christensen, Chris J., Arlington, N. J.
Christensen, L. Margaret, Hyattsville
Christopher, Edith, Cumberland
Cichetti, Licinio, Baltimore
Clark, Orpha, Frostburg
Clarke, Edward M., Emmitsburg
*Clement, Elizabeth M., Charleston, S. C.
Clift, Marion L., Washington, D. C.
Clipker, Minnie, Washington, D. C.
Clopper, Robert L., Smithsburg
*Clow, James H., Jr., Barclay

Coffin, Mamie, Berlin
*Coker, Mildred, Washington, D. C.
Cole, Douglas A., Baltimore
Cole, Mary A., Church Hill
Coleman, Veronica C., Cumberland
Coleman, Wilma, Hyattsville
Collins, Martha C., Bishopville
Collins, Stewart A., Riverdale
Comer, Alverta E., Frederick
*Cooley. Alice S., Baltimore
*Cooley, Franklin D., Baltimore
Compher, Ruth B., Poolesville
Conklin, Ada L., Hyattsville
Connell, Mary, Cumberland
Connelly, George E., Rising Sun
Connick, Harvey F., Washington, D. C.
Conroy, Ellen C., Barton
Conroy. Mary A., Barton
Conroy, Timothy E., Barton
Cooke, Thomas W., Washington, D. C.
*Cooper, Luther A., Baltimore
*Cooper, William P., Lonaconing
Cordrey, Myra E., Pittsville
*Corkran, Daniel E., Rhodesdale
Cosgrove, Leonardo M., Lonaconing
Cover, Blanche E., Mt. Airy
Covey. Hilda, Federalsburg
Covington. William W., St. Michaels
Cox. B. Franklin, Takoma Park
Craig, Madie E., Brentwood
Craigo, Raymond E., Newcomerstown, Ohio
Crandall, Percy B., Washington, D. C.
Cressman, Kathryn, Boonsboro
Crocker, Beatrice W., Silver Spring
Cronise, A. Katherine, Frederick
Crowder, Adelaide, Washington, D. C.
Crowe, Anna, Frostburg
Crumb, Mary R., Washington, D. C.
Cullen, Myrtle, Crisfield
Culler, Edna C., Walkersville
*Culley, Alfred E., Catonsville
Cunningham, Ethel J., Frostburg
Curtis, E. Gertrude, Crisfield
Cushen, Edward R., Hagerstown
Dahlgren, Ruby A., Friendsville
Daiker, Barbara V., Washington, D. C.
Dando, Lillian R., Frostburg
Dando, Mildred, Frostburg
Daniel, Leviah W., Frostburg
Darr, Verna E., Takoma Park, D. C.
Daughtrey, Helen J., Cumberland
Davis. Denzel E., Baltimore
*Davis, Gertrude J., Frostburg
*Davis, Herbert F., Middletown
Davis, Nellie M., Lonaconing
Davis, Sara C., Stanford, Kentucky
Davis, Thomas G., Frostburg

*Dawson, Hazel L., Cumberland
*Day, Roger X., Midland
*Day, Sister Theodora, Emmitsburg
de la Torre, Carlos, Baltimore
DeMarco, Mary A., Washington, D. C.
*DeShazo, Benjamin W., Washington, D. C.
Deneen, Grace, Cumberland
Dent, Walter P., Baltimore
Derr, L. Hubert, Monrovia
*Devilbiss, Wilbur, Middletown
*Diehl, William C., Clear Spring
Dilley, Edith, Frostburg
Dillon, Martha, Frostburg
Dixon, Darius M., Oakland
Dixon, Marion, Lonaconing
Dobyns, Elizabeth L., Oldham, Va.
Dolly, Thelma, Cumberland
*Donoho, Dorsey, Seaford. Del.
Dorsey, Agatha V., Midland
Dorsey, Marion A., Frederick
Doty, Lillie E., Greensboro
Dowden, Elizabeth E., Washington, D. C.
Downin, Lolita E., Williamsport
Downs, Naomi R., Williamsport
Downton, Lydia, Cumberland
*Dryden, George E., Stockton
Duckworth, Edna, Lonaconing
Duncan, Jessie D., Oxford
Dunham, Orleyna V., Oakland
*Dunnigan, Arthur P., Pylesville
Dunning, Robert E., Chevy Chase
Dutterer, Barbara M., Westminster
Dye, John C., Washington, D. C.
Dyott, Hazel S., Easton
Ebaugh, Frank C., Washington, D. C.
Ebberts, Edwin E., Elkridge
Eckhart, Edith V., Eckhart Mines
Edelen, Mary B., Bryantown
*Edwards, D. R., Takoma Park
Edwards, Earl L., Washington, D. C.
Ehle, Elizabeth V., Perry Point
Eiler, Charles M., Union Bridge
Elgin, Mattie W., Takoma Park
Elias. Edwin W., Frostburg
Elliott, Marguerite A., Washington, D. C.
Elliott, Sarah, Laurel
*Elsworth, Ethel J., Ruston, La.
Ely, Elinore, Mt. Pleasant
Emmons, Elizabeth, Suitland
*Endslow, Joseph, Streett
Endslow, Katherine A., Streett
*Engle, Martha M., Grantsville
*Engle, Ruth B., Frostburg
Ensor, Ellen F., Sparks
Entwisle, Lorena, Hyattsville
*Epstein, Bennie, Centreville
Ericson, Ruth O., Riverdale
Eskridge, Gertrude, Rhodesdale

Eskridge, Maude, Rhodesdale
*Essex, Alma F., Washington, D. C.
*Eutsler, Keener, Shepherdstown, W. Va.
Evans, Jack D., Pottsville, Pa.
*Evans, Jesse D., Crisfield
*Farley, Richard F., Takoma Park
Farr, Mary E., Wayside
Fellows, Paul D., Washington, D. C.
Ferguson, Harry F., Baltimore
*Ferguson, Lilly O., Cecilton
Ferrier, Myra V., Hyattsville
Files, Gwyndolyn, Solomons
*Fink, William C., Cordova
Firor, Marjorie E., Washington, D. C.
Fisher, Daniel L., Takoma Park
Fisher, Mary C., Rockville
*Fisher, Raymond A., Victoria, B. C.
Fissel, John E., Baltimore
Fitzgerald, Charlotte N., Princess Anne
Flanagan, Ada B., Walkersville
Fletcher, Mildred J., Takoma Park, D. C.
Flook, Howard O., Burkittsville
*Floyd, Rudolph S., Indian Head
Fochtman, Lenora M., Cumberland
Foehl, Marie E., Washington, D. C.
Foley, Katherine R., Oakland
Folk, Fern, Grantsville
Foltz, Charles T., Washington, D. C.
Forshee, Edith, Washington, D. C.
Forsyth, Blanche E., Friendsville
Forsythe, Lillian O., Hagerstown
*Foss, Noel E., Baltimore
*Foster, James J., Front Royal, Va.
Fouts, Charles W., Washington, D. C.
Fowler, Edythe M., Owings
*Fox, Eston F., Hagerstown
Foxwell, Gertrude E., Leonardtown
Francis, Helen G., Washington, D. C.
*Frazier, William A., Carrizo Spring, Texas
*French, Doris P., Brentwood
Freimann, Catherine E., Baltimore
*French, Edward S., Brentwood
Fricker, Blanche J., Washington, D. C.
Friend, Amy, Friendsville
Fulgham, Evel, Washington, D. C.
*Fuller, Frederick W., Jarrettsville
Fulks, Mary, Laytonsville
*Funk, Merle R., Boonsboro
Garland, Mildred D., Washington, D. C.
Garrett, Robert A., White Hall
Gary, Hylda M., Odenton
Gaver, Rachel E., Mt. Airy
*Getty, Frank J., Grantsville
Gibson, Ethel B., Tilghman
Gibson, Margaret H., Washington, D. C.
Gienger, Guy W., Hancock
*Gifford, George E., Rising Sun

Gilbert, Ruth L., Washington, D. C.
Gilliss, Mary A. F., St. Martin's
*Given, Maurice, Vinton, Va.
Gleason, Mamie M., Washington, D. C.
Goebel, John J., Barton
Goldsborough, Thomas A., Jr., Denton
Goodyear, Betty A., Riverdale
Gough, Katharine L., Laurel
Grafton, Ruth A., Baltimore
*Graham, Castillo, College Park
Graham, James B., Glenndale
*Graham, William C., North East
Grahams, Margaret C., Mt. Savage
Graves, Ethel, La Plata
Gray, Harry E., Riverdale
Green, Mary O., Boyds
*Greenberg, Harry L., Baltimore
Greene, Elsie P., Monrovia
*Griffin, E. Franklyn, Sharptown
Griffith, Elizabeth W., Laytonsville
Griffith, Paul, Frostburg
Grimes, Dora E., Ellicott City
*Grindle, John E., Lonaconing
Grohs, Virginia A., Washington, D. C.
Gross, Flora C., Brunswick
Gross, Lenna L., Towson
*Grove, Donald, Baltimore
Grove, Milford S., Williamsport
Gruver, Esdras S., Hyattsville
Guy, Eleanor L., Chester, S. C.
Guyton, Homer, Jefferson
Gwyn, Mary B., Glenndale
*Hackett, Thomas P., Queen Anne
Haddaway, Alice, Oxford
Hadley, Bernetta M., Lonaconing
Hall, Annie L., Glenndale
Hall, Jonathan, Washington, D. C.
Hamill, Merle, Deer Park
*Hammack, Russell C., Emmerton, Va.
Hannon, Agnes, Frostburg
Hannon, Joseph, Frostburg
*Hannum, Harold B., Berrien Springs, Mich.
Hanson, Ruth D., Frostburg
*Hare, Mildred W., Washington, D. C.
Harlan, Frances, Washington, D. C.
Harmon, June H., Silver Spring
Harper, J. Norman, Frederick
Harrison, Ernest I., Laurel
Harrison, Mabel C., Laurel
*Harry, Helen, Pylesville
Harshman, Edith L., Chewsville
*Harver, Fred F., Westminster
Hasson, George B., Perryville
Haugh, Donald C., Clear Spring
*Haviland, Anna G., Brookeville
Hayden, Agnes, Pope's Creek
Heffner, Ellen N., Williamsport

Hegnit, Alice F., Denton
Henault, Gladys M., Upper Marlboro
*Hendricks, Robert W., Baltimore
Hendrickson, D. F., Cumberland
Hepbron, Louise I., Betterton
Herbert, Virginia M., Clear Spring
Hess, L. Grace, Fallston
Hess, Palmer F., Hancock
Hesson, Cassandra T., Thurmont
*Heuberger, John W., Warren, R. I.
Heward, Lillie, Snow Hill
*Hiett, Herbert R., College Park
Higgins, Homer S., Vale Summit
*High, Louis F., Finksburg
Hightman, Elinor, Burkittsville
Hilder, Janie F., Washington, D. C.
*Hill, Elsie M., Cumberland
Hilton, Eugene W., Cumberland
Himes, William D., Seat Pleasant
Hobbs, L. Genevieve, Laurel
Hodge, Mary E., Washington, D. C.
Hodges, Virginia, Broome's Island
Holland, Marian L., Easton
Holmes, Ella V., Lonaconing
Holsted, Jonah, Severna Park
Holst, Rachel E., College Park
*Holter, Cecil K., Jefferson
*Hookom, Don W., Mt. Pleasant, Iowa
*Hoover, Jacob H., Fruitland
*Hoover, Paul P., Severna Park
Hopkins, Amy L., Gambrills
Horner, Theresa, Monie
Horner, William E., Monie
Horton, John, Washington, D. C.
Hosken, Margaret R., Washington, D. C.
House, Arthur B., College Park
House, Bolton M., College Park
Howard, Adrienne R., College Park
*Howard, M. Louise, Dayton
Howard, Ruth M., Washington, D. C.
Howes, Grace B., Rockville
Hubbard, Etta K., Royal Oak
Hudson, Robert F., East Haven, Conn.
*Huffington, Paul E., Bowie
Hughes, Carl R., Kensington
Hughes, Virginia, Easton
Hull, Bessie G., Clear Spring
Hume, Charlotte M., Adamstown
Humphreys, Edgeworth, Snow Hill
Hunt, Lula W., Annapolis
Hunt, Viola M., Lonaconing
Hurlock, M. Catherine, Church Hill
Hurlock, Ruth, Hurlock
*Huston, Reginald W., Salisbury
Hyde, Jennie, Barton
Imirie, Donald, Chevy Chase
Insley, F. Maurille, Cambridge
Irey, Richard B., Washington, D. C.

Itneyer, Nellie V., Hagerstown
Jackson, Lydia B., Salisbury
Jackson, Thomas, Berwyn
Jameson, Anna B., Hill Top
*Jarman, Gordon N., Edgewood Arsenal
*Jarman, Laura M., Staunton, Va.
Jenkins, Charles W., Washington, D. C.
*Jenkins, Stanleigh E., Hyattsville
*Jobe, William T., Washington, D. C.
*Joesting, Elizabeth, Vale
Johnson, Edwin, Williamsport
Johnson, Evelyn I., Barton
*Johnson, Paul H., Lancaster, Pa.
Johnson, Anna D., Beuna Vista, Va.
*Jones, Edith C., Cambridge
Jones, Eugenia, Macon, Ga.
Jones, Jane, Macon, Ga.
Jones, Mabel O., Pocomoke
Jones, Robert W., Frostburg
Jump, Margaret D., Queen Anne
Kaetzel, Raymond W., Gapland
Kalbaugh, Elizabeth, Frostburg
Kalbaugh, Virginia, Luke
Kanode, Albert, Washington, D. C.
Kaplan, Maurice A., Baltimore
Kauffman, Esther, Denton
Kaylor, Mary M., Hagerstown
Kedigh, Bertha, Newcomerstown, Ohio
Keech, Mary O., Charlotte Hall
Keener, Bernard H., Raspeburg
*Kefauver, J. Orville, Mt. Savage
Keister, Monroe F., Oldtown
Keith, Ethel, Middletown
Kelbaugh, Edward T., Baltimore
Keller, Minnie S., Buckeystown
*Keller, Ruth C., Grantsville
*Kellogg, Claude R., New York City, N. Y.
Kelley, Mary M., Millsboro, Del.
Kenny, Marguerita, Quogue, N. Y.
Kent, Betty, Baltimore
Kerby, Olive P., Bennings, D. C.
*Killiam, Audrey, Delmar, Del.
King, Helen I., Frederick
Kirby, Marion, Takoma Park
Kirby, Mildred, Anacostia Station
*Kirk, Jane, Colora
Kirwan, Blanche E., Crapo
Kirwan, Marguerite M., Crapo
Kirwan, Ruby B., Crapo
Kitzmiller, Mary W., Keedysville
*Knight, T. H. Owen, Dickerson
Krieg, Ella V., Buckeystown
Krivitsky, Samuel, Baltimore
*Kundahl, Rose E., Washington, D. C.
Lacy, Anne R., Trenton, N. J.
Lam, G. Irene, Cumberland
Lam, Virginia F., Cumberland
*LaMar, Austin A., Jr., Sandy Spring

Lamond, Angus, Takoma Park. D. C.
Lamond, Ethel-Jean W., Takoma Park, D. C.
LaMotte, Nova E., Woodlawn
*Lane, Constance, Washington, D. C.
Lane, Dorothy, Washington, D. C.
*Lane, John P., Chevy Chase
*Langford, Milby C., Vienna
Lank, Everett S., Washington, D. C.
Lank, John C., Salisbury
Largent, Beulah L., Cumberland
*Larmore, Lloyd L., Sharptown
*Lawless, Ruth C., Washington, D. C.
Lease, Henry, Midland
Leatherbury, Beatrice I., Shady Side
Lewis, Alice M., Eckhart
Lewis, Thomas W., Cumberland
*Likely, Robert H., Lisbon
Livingston, Gordon H., Clarendon, Va.
Lodge, Edna, Takoma Park
*Long, Arthur C., Baltimore
*Long, Darrell F., Selbyville, Del.
Lord, John W., Denton
Lovell, Mary H., Brentwood
*Lowe, William E., Sharptown
Luers, Virginia, Bowie
*Lumsden, David V., Washington, D. C.
Lynch, Elizabeth S., Riverdale
Lyons, Mary A., Frostburg
Macdonald, Elizabeth C., Silver Spring
Mace, Nina D., Washington, D. C.
*MacHamer, Harry C., Relay
Macoughtry, Helen G., Washington, D. C.
Magruder, Lorraine Y., Hagerstown
Magruder, Mary S., Conduit Road
*Manchey, L. Lavan, Baltimore
Mangum, Mary E., Washington, D. C.
Mangum, Susie A., Washington, D. C.
Manley, Catharine E., Midland
Manley, John F., Frostburg
Manley, Margaret R., Midland
Manley, Mary E., Midland
Mann, T. T., Little Orleans
Marshall Gwendolyn, Viola, Del.
*Marth, Paul C., Easton
*Marth, William C., Easton
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Culp, Everett, Union Bridge
Erdman, Harry, Burkettsville
Fenby, J. T., Baltimore
Gates, Daniel, Elk Garden, W. Va.
Gray, Francis, Kingsville
Hoover, Cyril, Headsville, W. Va.
Hufnal, Harvey, Crumpton
Keesecker, Mason, Bunker Hill, W. Va.
Lindke, Fred, Baltimore
Long, Joseph, Edmonston
Louhoff, Frederick, North East
Martin, Harold, Westminster
McClintock, W. L., Wye Mills
Newell, A. M., West River
Opie, Thomas, Olney
Schmeiser, Wm., Union Bridge
Showell, John, Hughesville
Stevenson, R., Grayton
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Williams, Patrick, Union Bridge
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